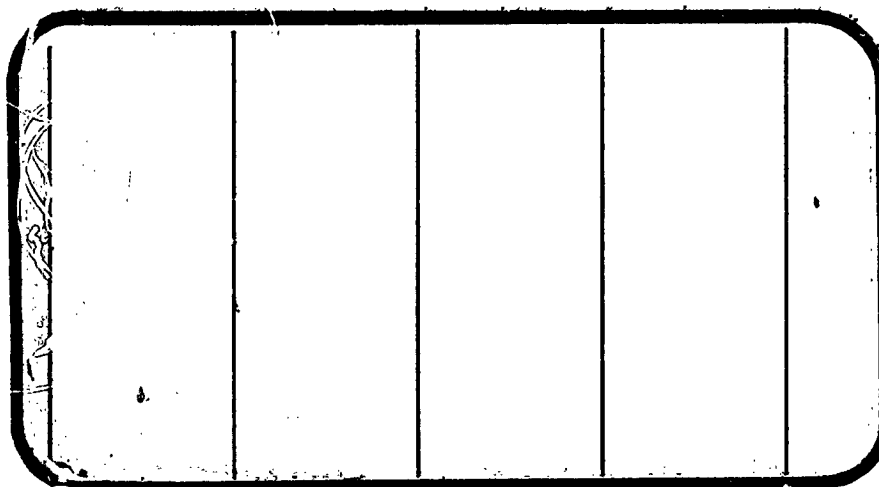




NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



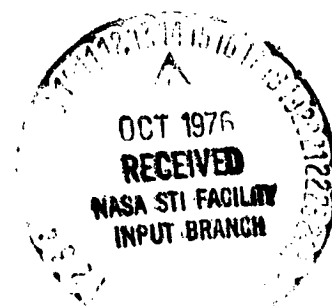
(NASA-CR-147616) HEAT TRANSFER OF AN
0.006-SCALE THIN-SKIN THERMOCOUPLE SPACE
SHUTTLE MODEL (50-0, 41-T) IN THE NASA-AMES
RESEARCH CENTER 3.5-FOOT HYPERSONIC WIND
TUNNEL AT MACH 5.3 (IH28), VOLUME 2

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANAGEMENT services

SPACE DIVISION



CHRYSLER
CORPORATION

August, 1976

DMS-DR-2180
NASA CR-147,616
VOLUME 2 OF 2

HEAT TRANSFER TEST OF AN 0.006-SCALE THIN-SKIN
THERMOCOUPLE SPACE SHUTTLE MODEL (50-0, 41-T) IN
THE NASA-AMES RESEARCH CENTER 3.5-FOOT HYPERSONIC
WIND TUNNEL AT MACH 5.3 (IH28)

by

J. W. Cummings/T. F. Foster
Shuttle Aerosciences
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NASA-Ames Research Center

Prepared Under Contract Number NAS9-13247

by

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New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: ARC 3.5-195
NASA Series Number: IH28
Model Number: 50-0, 41-T
Test Dates: May 17 through May 24, 1974
Occupancy Hours: 88

FACILITY COORDINATOR:

Joseph G. Marvin
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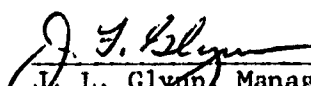
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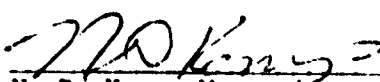
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Chrysler Corporation Space Division assumes no responsibility for the data presented other than display characteristics.

HEAT TRANSFER TEST OF AN 0.006-SCALE THIN-SKIN
THERMOCOUPLE SPACE SHUTTLE MODEL (50-0, 41-T) IN
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ABSTRACT

This report presents data obtained from a heat transfer test conducted on an 0.006-scale Space Shuttle Orbiter and External Tank in the NASA-Ames Research Center 3.5-foot Hypersonic Wind Tunnel. The purpose of this test was to obtain data under simulated return-to-launch-site abort conditions. Configurations tested were integrated orbiter and external tank, orbiter alone, and external tank alone at angles of attack of 0, ± 30 , ± 60 , ± 90 , and ± 120 degrees.

Runs were conducted at Mach numbers of 5.2 and 5.3 for Reynolds numbers of 1.0×10^6 and 4.0×10^6 per foot, respectively. Heat transfer data were obtained from 75 orbiter and 75 external tank iron-constantan thermocouples.

This report consists of 2 volumes. Volume 1 contains Figures 4-15; whereas, Volume 2 contains Figures 16-27 and the Tabulated Source Data.

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INDEX OF DATA FIGURES

FIGURE NUMBER	TITLE	SCHEDULE OF COEFFICIENTS			PAGES
		PLOTTED	CONDITIONS VARYING		
VOLUME 1					
4	TANK, ALONE	(A)	HAW/HT, PHI, ALPHA, RN/L, X/L, MACH	1-112	
5	TANK, IN THE PRESENCE OF ORBITER	(A)	HAW/HT, PHI, ALPHA, RN/L, X/L, BETA, MACH	113-335	
6	TANK, RATIO OF INTERFERENCE TO UNDISTURBED	(B)	PHI, ALPHA, X/L	337-373	
7	ORBITER UNDERSIDE FUSELAGE, ORBITER ALONE	(C)	HAW/HT, BP, ALPHA	374-395	
8	ORBITER UNDERSIDE FUSELAGE, ORBITER IN THE PRESENCE OF THE TANK	(C)	HAW/HT, BP, ALPHA RN/L, BETA, MACH	396-427	
9	ORBITER UNDERSIDE FUSELAGE, RATIO OF INTERFERENCE TO UNDISTURBED	(D)	BP, ALPHA	428-440	
10	ORBITER BODY SIDEWALL, ORBITER ALONE	(E)	HAW/HT, Z, ALPHA, X/L	441-528	
11	ORBITER BODY SIDEWALL, ORBITER IN PRESENCE OF THE TANK	(F)	HAW/HT, Z, ALPHA RN/L, X/L, BETA, MACH	529-656	
12	ORBITER BODY SIDEWALL, RATIO OF INTERFERENCE TO UNDISTURBED	(F)	Z, ALPHA, X/L	657-690	
13	OMS PODS, ORBITER ALONE	(E)	HAW/HT, X/L, ALPHA, Z	691-720	
14	OMS PODS, ORBITER IN PRESENCE OF THE TANK	(E)	HAW/HT, X/L, ALPHA, RN/L, BETA, Z, MACH	721-768	
15	OMS PODS, RATIO OF INTERFERENCE TO UNDISTURBED	(D)	Z, ALPHA	769-789	

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FIGURE NUMBER	TITLE	SCHEDULE OF COEFFICIENTS		CONDITIONS VARYING	PAGES
		PLOTTED			
16	CHINE, ORBITER ALONE	(C)		HAW/HT, ALPHA	790-800
17	CHINE, ORBITER IN PRESENCE OF THE TANK	(C)		HAW/HT, ALPHA, RN/L, MACH	801-811
18	CHINE, RATIO OF INTERFERENCE TO UNDISTURBED	(D)		ALPHA	812-822
19	LEFT WING LOWER SURFACE, ORBITER ALONE	(G)		HAW/HT, 2Y/B, ALPHA	823-855
20	LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK	(G)		HAW/HT, 2Y/B, ALPHA, RN/L, BETA, MACH	856-903
21	LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED	(H)		2Y/B, ALPHA	904-918
22	RIGHT WING UPPER SURFACE, ORBITER ALONE	(I)		HAW/HT, 2Y/B, ALPHA, X/C	919-995
23	RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK	(I)		HAW/HT, 2Y/B, ALPHA, RN/L, BETA, X/C, MACH	996-1107
24	RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED	(J)		2Y/B, ALPHA, X/C	1108-1139
25	VERTICAL TAIL, ORBITER ALONE	(G)		HAW/HT, Z, ALPHA	1140-1161
26	VERTICAL TAIL, ORBITER IN PRESENCE OF TANK	(G)		HAW/HT, Z, ALPHA RN/L, BETA, MACH	1162-1193
27	VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED	(H)		Z, ALPHA	1194-1206

INDEX OF DATA FIGURES (Concluded)

SCHEDULE OF COEFFICIENTS PLOTTED:

- (A) $H/HREF$ versus X/L
 $I/HREF$ versus PHI
- (B) HI/HU versus X/L
 HI/HU versus PHI
- (C) $H/HREF$ versus X/L
- (D) HI/HU versus X/L
- (E) $H/HREF$ versus X/L
 $H/HPEF$ versus Z
- (F) HI/HU versus X/L
 HI/HU versus Z
- (G) $H/HREF$ versus X/C
- (H) HI/HU versus X/C
- (I) $H/HREF$ versus X/C
 $H/HREF$ versus $2Y/B$
- (J) HI/HU versus X/C
 HI/HU versus $2Y/B$

NOMENCLATURE

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
b		thickness of model skin, in.
B	BREF	span length, in.
C		specific heat of model skin material, BTU/lb _m -°R
c		chord length, in.
C ₀ , C ₁ , C ₂		constants in curve fit for C over model wall temperature range
c _p		specific heat of air stream (perfect gas value), BTU/lb _m -°R
CHAN	CHAN	Recording-system channel
H _{aw}	HAW	adiabatic wall enthalpy, BTU/lb _m
H _t	HT	free-stream total enthalpy, BTU/lb _m
	HO	average of free-stream total enthalpy values of all tunnel runs incorporated into an aero data-set, BTU/lb _m
H _{w1}	HW	enthalpy based on model wall temperature for given T/C location at initial time, BTU/lb _m
h	H	heat-transfer coefficient at model wall for given T/C location
h _s	HS, HREF	stagnation-point heat-transfer coefficient for reference sphere
h/h _s	H/HS, H/HREF	ratio of model heat-transfer coefficient to heat-transfer coefficient of reference sphere for H _{aw} /H _t = X.XXX
IML		inner mold line
L	LREF, LENGTH	model reference length, in. or ft.
M _∞	MACH	free-stream Mach number
H _w		enthalpy based on model wall temperature, BTU/lb _m

NOMENCLATURE (Continued)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
P_t	PT	free-stream total pressure, psia
	PO	average of free-stream total pressure values of all tunnel runs incorporated into an aero dataset, psia
\dot{q}_i	QDOT,Q	heat-transfer rate at model wall for given T/C location at initial time, BTU/ft ² -sec
\dot{q}_s	QS, QREF	stagnation-point heat-transfer rate for reference sphere at initial time, BTU/ft ² -sec
R_s	RS	reference sphere radius at model scale equivalent to 0.305 m (1 ft) for full-scale vehicle
Re_∞/ft	RE/FT	free-stream Reynolds number per foot
	RN/L	average of free-stream Reynolds number values (per foot) of all tunnel runs incorporated into an aero dataset
$Re_{\infty,L}$	REL	free-stream Reynolds number based on model reference length, L
	S/R	body wetted running length
St	ST	Stanton number based on free-stream flow conditions and the model heat-transfer coefficient for $H_{aw}/R_t = X.XXX$
T		temperature, °R
T_t	TT	free-stream total temperature, °R
	TO	average of free-stream total temperature values of all tunnel runs incorporated into an aero dataset, °R
T_{w_1}	TW	model wall temperature for given T/C location at initial time, °R

NOMENCLATURE (Continued)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
T/C	T/C	thermocouple
t		time, sec
t _i	TIME	initial time (before model insertion into flow) extrapolated from f(T _w) vs. time, sec
u, V		velocity, ft/sec
W		density of model skin material lb _m /ft ³
X		axial distance measured from nose, in.
	X/C	chordwise location, fraction of local chord
	X/L	longitudinal location, fraction of body length
Y		spanwise distance from centerline, in.
2y/B	2Y/B	spanwise location, fraction of semi-span
Z	Z	water plane distance, in.
	Z/EV	spanwise location on vertical tail, fraction of exposed span
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
μ		viscosity of air, lb-sec/ft ²
ρ		density of air, lb _m /ft ³
θ	THETA	external tank angular surface coordinate, measured clockwise looking forward. 0 degrees at bottom centerline, degrees
φ	PHI	orbiter angular surface coordinate, measured clockwise looking forward. 0 degrees at bottom centerline, degrees

NOMENCLATURE (Concluded)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
W.P.		water plane, height measured along Z axis, in.
B.L.	BP	butt plane, distance from orbiter centerline in the outboard direction, in.
	HI/HU	ratio of interference to undisturbed heat transfer coefficients
	ZMRP	moment reference point on Z axis
	YMRP	moment reference point on Y axis
	XMRP	moment reference point on X axis
	SREF	reference length or wing mean aerodynamic chord; ft.

SUBSCRIPTS

aw	adiabatic wall
i	initial value before model insertion
O	Orbiter
PG	perfect gas (calorically and thermally perfect gas)
s	reference sphere
t	free-stream total condition
T	tank
V	vertical tail
W	wall
∞	free-stream

CONFIGURATIONS INVESTIGATED

The model (Orbiter and External Tank) tested was a 0.006-scale representation of the Rockwell International Space Shuttle Vehicle. The Orbiter and External Tank are defined by Rockwell lines SS-H-01414 and SS-H-01415.

The Orbiter and Tank were initially built by Grumman Aircraft, Bethpage, New York, but the Orbiter was modified with additional thermocouples added to the upper surface of the left wing, vertical tail, and OMS pod. Modifications of both Orbiter and External Tank stings were accomplished to carry increased loading within the high angle of attack range.

The Orbiter was a full span (cast stainless steel) model with thin-skin inserts. Thin-skin stainless steel (17-4PH) inserts were located on the underside region, left-hand wing (top and bottom), windshield area, left fuselage side, OMS pod, and vertical tail. These inserts were instrumented with 89 iron-constantan thermocouples of which only 75 were used during this test. The model was built with all control surfaces in the 0° deflection condition.

The External Tank was constructed of thin-skin (15-5PH) stainless steel. The Tank was instrumented with 111 iron-constantan thermocouples, of which only 75 were used.

The Orbiter and External Tank were designed so either could be tested alone or in the second stage configuration.

CONFIGURATIONS INVESTIGATED (Concluded)

The following configuration components were tested:

<u>Notation</u>	<u>Description</u>
B ₂₂	Fuselage (1-147B Lines)
C ₇	Canopy
F ₅	Body Flap
M ₄	OMS Pods
V ₇	Vertical Tail
W ₁₁₁	Wing
T ₈	External Tank (-139 Lines)

MODEL INSTRUMENTATION

The Orbiter and External Tank were instrumented with 200 iron-constantan thermocouples, but only 150 were used for this test. All thermocouples were spotwelded to thin-skin (nominal skin thickness of 0.030 in.) stainless steel inserts and the leads were clamped in bundles within the model. The exact T/C locations for the Orbiter and External Tank are presented in Tables IV and V, respectively, and illustrated in Figures 2a and 2b, respectively. The T/C leads were 50 feet long and fitted with Cannon Plug connectors.

TEST FACILITY DESCRIPTION

The NASA-Ames 3.5-foot Hypersonic Wind Tunnel is a closed-circuit, blowdown-type tunnel capable of operating at nominal Mach numbers of 5, 7, and 10 at pressures to 1800 psia and temperatures of 3400°R for run times to four minutes. The major components of the facility include a gas storage system where the test gas is stored at 3000 psi, a storage heater filled with aluminum-oxide pebbles capable of heating the test gas to 3400°R, axisymmetric contoured nozzles with exit diameters of 42 inches for generating the desired Mach number, and a 900,000 ft³ vacuum storage system which operates to pressures of 0.3 psia. The test section itself is an open-jet type enclosed within a chamber approximately 12-feet in diameter and 40-feet in length, arranged transversally to the flow direction.

A model support system is provided that can pitch models through an angle-of-attack range of -20 to +20 degrees, in a vertical plane, about a fixed point of rotation on the tunnel centerline. This rotation point is adjustable from 1 to 5 feet from the nozzle exit plane. The model normally is out of the test stream (strut centerline 37 inches from tunnel centerline) until the tunnel test conditions are established after which it is inserted. Insertion time is adjustable to as little as $\frac{1}{2}$ second and models may be inserted at any strut angle.

A high-speed, analog-to-digital data acquisition system is used to record test data on magnetic tape. The present system is equipped to measure and record the outputs from 80 transducers in addition to 20 channels of tunnel parameters.

TEST PROCEDURE

Heat Transfer Data were obtained by measuring the temperature rise over a period of time from a total of 150 iron-constantan thermocouples. The model was injected into the flow in approximately 1 second and held on tunnel centerline for approximately 1 second. Temperature measurements and tunnel conditions were recorded on magnetic tape at 0.07-second intervals by the data acquisition system from the start of model injection to the start of model retraction.

A maximum of 75 thermocouples could be recorded for any given run. The thermocouple leads were routed from the model through the tunnel model-injection mechanism, and connected to a junction box which was wired directly to a thermocouple reference-temperature (150°F) box. The junction box connectors were wrapped with asbestos for heat protection from the tunnel test-chamber ambient conditions (no free-stream flow on box). Thermocouple changes were accomplished by changing 5 Cannon Plugs containing 15 thermocouples each. Prior to testing, a thermocouple heat-response check, through the data-acquisition system, was performed on all thermocouples to assure proper hook-up, polarity and response.

Prior to each run with model attitude changes, the model was leveled in pitch and roll by means of leveling blocks which attach to the sting assembly of the Orbiter/External Tank. When leveling the models, an inclinometer was placed on the leveling plate. Proper roll relationships between the models were set using scribed lines on the model stings.

DATA REDUCTION

All test data were reduced at the NASA/Ames Research Center using the data-reduction techniques outlined below. The thermocouple data were reduced using the one-dimensional, thin-wall equation:

$$\dot{q} = W C_b \frac{dT_w}{dt} = h (H_{aw} - H_w) \equiv h H_t \left(\frac{H_{aw}}{H_t} - \frac{H_w}{H_t} \right) \quad (1)$$

which neglects heat-conduction losses.

Assuming that W and h are constant and

$$C = C_0 + C_1 T_w + C_2 T_w^2 \text{ for } T_w \text{ ranges} \quad (2)$$

the integration of equation (1) for $t = t_1$ to t and $T_w = T_{w1}$ to T_w yields the linear equation:

$$\begin{aligned} f(T_w) &= -\ln \left(\frac{T_{aw}^* - T_w}{T_{aw}^* - T_{w1}} \right) - \left[\frac{C_1}{C_{aw}^*} + \frac{C_2}{C_{aw}^*} \left(T_{aw}^* + \frac{T_w + T_{w1}}{2} \right) \right] (T_w - T_{w1}) \\ &= \frac{h c_p}{W C_{aw}^*} (t - t_1) \end{aligned} \quad (3)$$

where it is defined that:

$$T_{aw}^* \equiv \frac{H_{aw}}{c_p} \equiv \frac{H_{aw}}{H_t} \frac{H_t}{c_p} \geq (T_{aw})_{PG} \quad (4)$$

$$C_{aw}^* \equiv C_0 + C_1 T_{aw}^* + C_2 T_{aw}^{*2} \quad (5)$$

c_p specific heat at adiabatic wall temperature

DATA REDUCTION (Continued)

The form of Eq (3) is $f(T_w) = mt + a$ where m is the slope and a is the intercept for a straight line if heat-conduction errors are negligible. Thus, deviations from a straight line can indicate heat-conduction effects.

The slope, m , of $f(T_w)$ vs t from Eq (3) is computed by a least-squares, straight-line fit over a finite time interval (approx. 1 sec) beginning when the model reaches uniform tunnel flow. The value of the heat-transfer coefficient, h , is then determined from:

$$h = \frac{WC_{AW}^b}{C_p} m \quad (6)$$

Using this value of h , the heat-transfer rate is evaluated at the initial time, t_1 , when the model is isothermal at the initial wall enthalpy,

H_{w1}

$$\dot{q} = \dot{q}_1 = h (H_{AW} - H_{w1}) \equiv h H_t \left(\frac{H_{AW}}{H_t} - \frac{H_{w1}}{H_t} \right) \quad (7)$$

where H_{AW}/H_t is the same value used to evaluate h . The resultant value of \dot{q} is independent of the value of H_{AW}/H_t used for both the h and \dot{q} evaluations.

The reference sphere heating is also evaluated at the initial wall enthalpy by the method of Fay and Riddell

$$\dot{q}_s = h_s (H_t - H_{w1}) \equiv h_s H_t \left(1.0 - \frac{H_{w1}}{H_t} \right) \quad (8)$$

The model-to-sphere ratio of heat-transfer coefficients is then determined from Eqs. (7) and (8) as

$$\frac{h}{h_s} = \frac{\dot{q}_1}{\dot{q}_s} \left[\frac{1.0 - H_{w1}/H_t}{H_{AW}/H_t - H_{w1}/H_t} \right] \quad (9)$$

DATA REDUCTION (Concluded)

where \dot{q}_1 is constant for all values of H_{aw}/H_t .

To determine h/h_g for various values of H_{aw}/H_t , the particular value of H_{aw}/H_t is substituted into Eq. (9).

The Stanton number is defined as

$$St \equiv \frac{h}{\rho u} = \frac{\dot{q}_1}{\rho u (H_{aw} - H_{w1})} \quad (10)$$

where for free-stream conditions, $\rho u = \rho_\infty V_\infty$.

The calculations of the model heating, reference sphere heating, and Reynolds number included the corrections of NACA report 1135 (Ref. 3) for calorically imperfect, thermally perfect air. Keyes' equation for viscosity (Ref. 4) was also used for the sphere heating and Reynolds number computations:

$$\mu = \frac{0.0232 \times 10^{-6} T^{0.5}}{1 + \frac{220}{T} \times 10^{-9/T}} \quad (11)$$

where the units for T and μ are $^{\circ}R$ and $lb\text{-}sec/ft^2$, respectively.

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1. Walstad, D. G.: Pretest Information for Tests of an 0.006-Scale Thin-Skin Space Shuttle Heat Transfer Model (50-O, 41-T) in the Ames Research Center 3.5-foot HWT Wind Tunnel Test IH28. SD-74 SH-0135, March 27, 1974.
2. Fay, J. A.; and Riddell, F. R.: Theory of Stagnation Point Heat Transfer in Dissociated Air. J. Aeron. Sci., Vol. 25, No. 1, February, 1958, pp 73-85.
3. Ames Research Staff: Equations, Tables, and Charts for Compressible Flow. NACA Rept. 1135. 1953.
4. Bertram, Mitchel H.: Comment on "Viscosity of Air." J. Spacecraft and Rockets, Vol. 4, No. 2, February, 1967, pp 287-288.

TABLE I.

[illegible]

TABLE II.

DATA SET / RUN NUMBER COLLATION SUMMARY										DATE: JUNE 1974	
TEST: TH28 (ARC 3.5-195)										TEST RUN NUMBERS	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES		NO. OF RUNS	MODEL THERMOCOUPLE HOODMUP				
		α	β	Re^*	M_{∞}		T_i	C_i			
REV001	Q/T _i	0	0	1.0	5.2	2	2	1			
02		30					3	7			
03		60					4	5			
04		90					17	18			
05		120					20	19			
06		120					21	22			
07		90					24	23			
08		60					13	14			
09		30					16	15			
10		60		4.0	5.3		12	6			
11		30		4.0	5.3		10	11			
12		30		5	1.0	5.2	9	8			
13	T _i	0	0			1	33	-			
14		30					31	-			
15		60					32	-			
16		90					37	-			
17		120					38	-			
TYPE OF DATA											
COEFFICIENT SCHEDULES											
Q _i - ORBITAL THERMOCOUPLE HOODMUP (CONST. SET 100)											
T _i - TANK THERMOCOUPLE HOODMUP (CONST. SET 200)											
IDVAR (1)											
IDVAR (2)											
NDV											
*X10 ⁻⁶ PER FT.											

TABLE II. (Concluded)

[illegible]

The 4th character of the dataset identifier describes the T/C location.

A	- underside fuselage	C	- OMS pods	F	- wing lower surface
T	- external tank	D	- chine	G	- wing upper surface
B	- body sidewall	E	- canopy	H	- vertical tail

TABLE III
MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY - B22

GENERAL DESCRIPTION: Fuselage Configuration 3A per Rockwell Lines
VL70-000147B.

NOTE: Identical to B19, except underside.

Model Scale = 0.006

DRAWING NUMBER: VL70-000147B

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length - in	<u>1290.3</u>	<u>7.742</u>
Max. Width - in	<u>267.6</u>	<u>1.606</u>
Max. Depth - in	<u>244.5</u>	<u>1.467</u>
Fineness Ratio	<u>4.84601</u>	<u>4.84601</u>
Area - Ft ²		
Max. Cross-Sectional	<u>386.67</u>	<u>0.0139</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: Canopy - C7

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139

Model Scale = 0.006

DRAWING NUMBER VL70-000139

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length ($X_0 = .433$ to $X_0 = 670$) - in. FS	<u>237</u>	<u>1.422</u>
Max Width	<u> </u>	<u> </u>
Max Depth ($Z_0 =$ to $Z_0 = 501$) - in FS	<u> </u>	<u> </u>
Fineness Ratio	<u> </u>	<u> </u>
Area	<u> </u>	<u> </u>
Max Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: F5 Body Flap

GENERAL DESCRIPTION: 3 Configuration per Rockwell Lines VL70-000139

Scale Model = 0.006

DRAWING NUMBER VL70-000139

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length - in	<u>84.70</u>	<u>.508</u>
Max Width - in	<u>267.6</u>	<u>1.606</u>
Max Depth	<u></u>	<u></u>
Fineness Ratio	<u></u>	<u></u>
Area - Ft ²	<u></u>	<u></u>
Max Cross-Sectional	<u></u>	<u></u>
Planform	<u>142.5</u>	<u>.005</u>
Wetted	<u></u>	<u></u>
Base	<u>38.0958</u>	<u>.0014</u>

TABLE III. (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: OMS Pod - M₄

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139

NOTE: M₄ identical to M₃, except intersection to fuselage.

Model Scale = 0.006

DRAWING NUMBER

VL70-000139

DIMENSION:

FULL SCALE

MODEL SCALE

Length - IN

346.0

2.076

Max Width - IN

108.0

.648

Max Depth - IN

113.0

.678

Fineness Ratio

Area - FT²

Max Cross-Sectional

Planform

Wetted

Base

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: T8 - EXTERNAL TANK

GENERAL DESCRIPTION: 2A Configuration per Rockwell Lines:

VL78-000018 and VL72-000061 "C" Body of Revolution

Scale Model = 0.006

DRAWING NUMBER VL78-000018

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length - In. (Nose @ $X_T = 309$)	<u>186.50</u>	<u>1.119</u>
Max Width (Dia) - In.	<u>324.0</u>	<u>1.944</u>
Max Depth	<u> </u>	<u> </u>
Fineness Ratio L/D	<u>6.1389</u>	<u>6.1389</u>
Area - Ft. ²		
Max Cross-Sectional	<u>572.56</u>	<u>0.02061</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>
WP of tank centerline, (Z_T) In.	<u>400.0</u>	<u>2.400</u>

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: VERTICAL - V7

GENERAL DESCRIPTION: Centerline Vertical Tail, Doublewedge Airfoil
with Rounded Leading Edge

NOTE: Same as V5, but with manipulator housing removed.

Model Scale = 0.006

DRAWING NUMBER:

VL70-000139

DIMENSIONS:

TOTAL DATA

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area (Theo) Ft ²	<u>425.92</u>	<u>0.0153</u>
Planform		
Span (Theo) In	<u>315.72</u>	<u>1.894</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>26.249</u>	<u>26.249</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>1.611</u>
Tip (Theo) WP	<u>108.47</u>	<u>0.651</u>
MAC	<u>199.81</u>	<u>1.199</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>8.781</u>
W. P. of .25 MAC	<u>635.522</u>	<u>3.813</u>
B. L. of .25 MAC	<u>0.00</u>	<u>0.00</u>
Airfoil Section		
Leading Wedge Angle Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>2.0</u>	<u>2.0</u>
Void Area	<u>13.17</u>	<u>0.0005</u>
Blanketed Area	<u>0.00</u>	<u>0.00</u>

TABLE III (Concluded)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: WING-W 111

GENERAL DESCRIPTION: Configuration 3A per Rockwell Lines VL70-000147B.

NOTE: Identical to W107, except lowered 3.5" and increased cuff incidence.

Model Scale = 0.006

TEST NO.

DWG. NO. VL70-000147B

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area (Theo.) Ft^2

Planform

Span (Theo) In.

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, degrees (@ T.E. of Elevon)

Incidence Angle, degrees

Aerodynamic Twist, degrees

Sweep Back Angles, degrees

Leading Edge

Trailing Edge

0.25 Element Line

Chords:

Root (Theo) B.P.O.O.

Tip, (Theo) B.P.

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

EXPOSED DATA

Area (Theo) Ft^2

Span, (Theo) In. BP108

Aspect Ratio

Taper Ratio

Chords

Root BP108

Tip $1.00 \frac{b}{2}$

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section (Rockwell Mod HASA)

XXXX-64

Root $\frac{b}{2}$ = @ Y₀ 199 to NACA 0010

Tip $\frac{b}{2}$ =

Data for (1) of (2) Sides

Leading Edge Cuff Ft^2

Planform Area Ft^2

Leading Edge Intersects Fus M. L. @ Sta

Leading Edge Intersects Wing @ Sta

TABLE IV ORBITER THERMOCOUPLE LOCATIONS

T/C No.	Skin Thick	LOCATION					T/C No.	Skin Thick	LOCATION				
		x/l	x/z	y	b/2	z			x/l	x/c	y	b/2	z
1	.035	.025					35	.035	.60				
2		.050					36	.034	.70				
3		.075					37	.032	.70				
4	.034	.10					38	.035	.70				
5	.033	.125					39		.825				
6		.150					40		.825		OMS PODS		
7	.034	.175		UNDERSIDE			41		.825				
8		.20		FUSELAGE			42		.90				
9	.035	.25		BP = 0.0			43		.90				
10		.30					44		.90				
11	.034	.40					45	.035	.10				
12	.035	.50					46		.15		CHINE		
13		.65					47		.20				
14		.80					48		.17		CANOPY		
15	.036	.95					49*		.425		MID FUSE		
16	.030	.35					50	.031		.05		40%	
17	.027	.40		UNDERSIDE			51	.030		.10		40%	
18		.50		FUSELAGE			52*	.030		.20		40%	
19 *		.60		BP = 117.0			53	.029		.30		40%	
20		.70					54*	.028	WING	.40		40%	
21 *	.028	.80					55		LWR	.50		40%	
22	.031	.90					56*			.60		40%	
23 *	.036	1.00					57			.70		40%	
24	.034	.30					58*	.029		.80		40%	
25	.033	.30					59			.90		40%	
26	.034	.30		BODY			60	.034		.10		60%	
27	.035	.40		SIDEWALL			61	.032		.20		60%	
28	.034	.40					62*	.031		.30		60%	
29	.035	.40					63*	.030	WING	.40		60%	
30		.50					64*		LWR	.50		60%	
31	.034	.50					65			.60		60%	
32	.035	.50					66*			.70		60%	
33		.60					67*			.80		60%	
34	.033	.60					68			.90		60%	

TABLE V EXTERNAL TANK THERMOCOUPLE LOCATIONS

T/C NO.	SKIN THICK.	LOCATION		T/C NO.	SKIN THICK.	LOCATION		T/C NO.	SKIN THICK.	LOCATION	
		X/1	Φ DEG.			X/1	Φ DEG.			X/1	Φ DEG.
1	0.037	0	NOSE	34	0.032	0.40	135	67	0.030	0.60	45
2	0.030	0.005	180	35	0.033	0.40	112.5	68	0.030	0.60	0
3	0.030	0.010		36	0.033	0.40	90	69 *	0.033	0.625	180
4	0.030	0.020		37	0.030	0.40	67.5	70	0.033	0.65	180
5	0.030	0.04		38	0.029	0.40	45	71	0.032	0.65	157.5
6	0.030	0.06		39	0.031	0.40	0	72	0.031	0.65	135
7	0.029	0.08		40	0.032	0.425	180	73	0.030	0.65	112.5
8	0.029	0.10		41	0.032	0.45	180	74 *	0.030	0.65	90
9	0.028	0.125		42	0.033	0.45	157.5	75 *	0.030	0.65	67.5
10	0.028	0.15		43	0.031	0.45	135	76 *	0.033	0.675	180
11	0.028	0.175		44	0.031	0.45	112.5	77	0.033	0.70	180
12	0.028	0.20	180	45 *	0.031	0.45	90	78	0.032	0.70	157.5
13	0.028	0.20	90	46	0.033	0.475	180	79	0.032	0.70	135
14 *	0.032	0.25	180	47	0.033	0.50	180	80 *	0.031	0.70	112.5
15 *	0.029	0.25	90	48	0.033	0.50	157.5	81	0.030	0.70	90
16 *	0.030	0.275	112.5	49	0.032	0.50	135	82 *	0.031	0.70	67.5
17 *	0.030	0.275	90	50	0.033	0.50	112.5	83 *	0.029	0.70	45
18	0.034	0.30	180	51	0.031	0.50	90	84	0.033	0.75	180
19 *	0.031	0.30	112.5	52 *	0.031	0.50	67.5	85	0.033	0.75	157.5
20 *	0.031	0.30	90	53 *	0.030	0.50	45	86	0.032	0.75	135
21 *	0.030	0.30	67.5	54	0.032	0.525	180	87 *	0.031	0.75	112.5
22 *	0.031	0.325	135	55	0.032	0.55	180	88 *	0.031	0.75	90
23 *	0.031	0.325	112.5	56	0.033	0.55	157.5	89 *	0.030	0.75	67.5
24 *	0.031	0.325	90	57	0.031	0.55	135	90	0.033	0.80	180
25	0.032	0.35	180	58	0.031	0.55	112.5	91	0.033	0.80	157.5
26	0.032	0.35	135	59 *	0.031	0.55	90	92	0.032	0.80	135
27	0.031	0.35	112.5	60	0.032	0.575	180	93 *	0.032	0.80	112.5
28	0.031	0.35	90	61	0.032	0.60	180	94	0.031	0.80	90
29 *	0.031	0.35	67.5	62	0.033	0.60	157.5	95 *	0.030	0.80	67.5
30	0.034	0.375	180	63	0.031	0.60	135	96 *	0.029	0.80	45
31	0.032	0.375	135	64	0.031	0.60	112.5	97 *	0.030	0.80	0
32	0.033	0.40	180	65	0.031	0.60	90	98	0.033	0.85	180
32	0.032	0.40	157.5	66	0.031	0.60	67.5	99	0.032	0.85	157.5
								100	0.032	0.85	135
								101 *	0.030	0.85	112.5
								102 *	0.030	0.85	90
								103	0.030	0.90	180
								104	0.033	0.90	157.5
								105	0.032	0.90	135
								106 *	0.032	0.90	112.5
								107	0.031	0.90	90
								108 *	0.030	0.90	67.5
								109 *	0.029	0.90	45
								110 *	0.032	0.935	180
								111 *	0.033	0.974	180

* Data were not obtained at these T/C locations.

TABLE VI
RUN NUMBER/TUNNEL CONDITION SUMMARY

Run No.	Config $\phi_1 + \tau_1$	α_m , deg.	α_{strut} , deg.	β	Const Set**	M_∞	Re_∞ /ft $\times 10^{-6}$	Nominal***		
								P_t psia	T_t or	
								100	1500	
1		0	0	0	100	5.22	1.0			
2		0	0		200					
3		30	-10.0		200					
4		60	20.0		200					
5		60	20.0		100					
6		60	20.0		100	5.3	4.0	410		
7		30*	-10.0*		100	5.22	1.0	100		
8		*	*	-5	100			100		
9		*	*	-5	200			100		
10		30	-10.0	0	200	5.3	4.0	100		
11		30	-10.0		100			410		
12		60	20.0		200			410		
13		-60	-20.0		200			410		
14		-60	-20.0		200	5.22	1.0	100		
15		-30	10.0		100					
16		-30	10.0		200					
17		90	-10.0		200					
18		90	-10.0		100					
19		120	20.0		100					
20		120	20.0		200					
21		-120	20.0		200					
22		-120	20.0		100					
23		-90	-10.0		100					
24		-90	-10.0		200					
25		-90	-10.0		100					
26	ϕ_1 ϕ_1	-120	20.0		100					

* $\alpha_m = 30^\circ 22' 32''$, $\alpha_{strut} = -9^\circ 37' 28''$

** 100 - Orbiter T/cs; 200 - External Tank T/cs

*** Actual test values are given in the Appendix

TABLE VI
RUN NUMBER/TUNNEL CONDITION SUMMARY (Concluded)

Run No.	Config	α_m , deg.	α_{strut} , deg.	β	Const Set**	Nominal***			
						M_∞	Re_∞ / r_t $\times 10^{-6}$	P_t rsia	T_t OR
27	O ₁	120	20.0	0	100	5.22	1.0	100	1500
28	T ₁	90	-10.0		100				
29		-60	-20.0		100				
30	T ₁	-30	10.0		100				
31		-30	10.0		200				
32	O ₁	-60	-20.0		200				
33		0	0		200				
34	T ₁	0	0		100				
35		30	-10.0		100				
36	T ₁	60	20.0		100				
37		-90	-10.0		200				
38	T ₁	-120	20.0		200				
39		-90	-10.0		200	5.3	4.0	410	

** 100 - Orbiter T/Cs; 200 - External Tank T/Cs
*** Actual test values are given in the Appendix

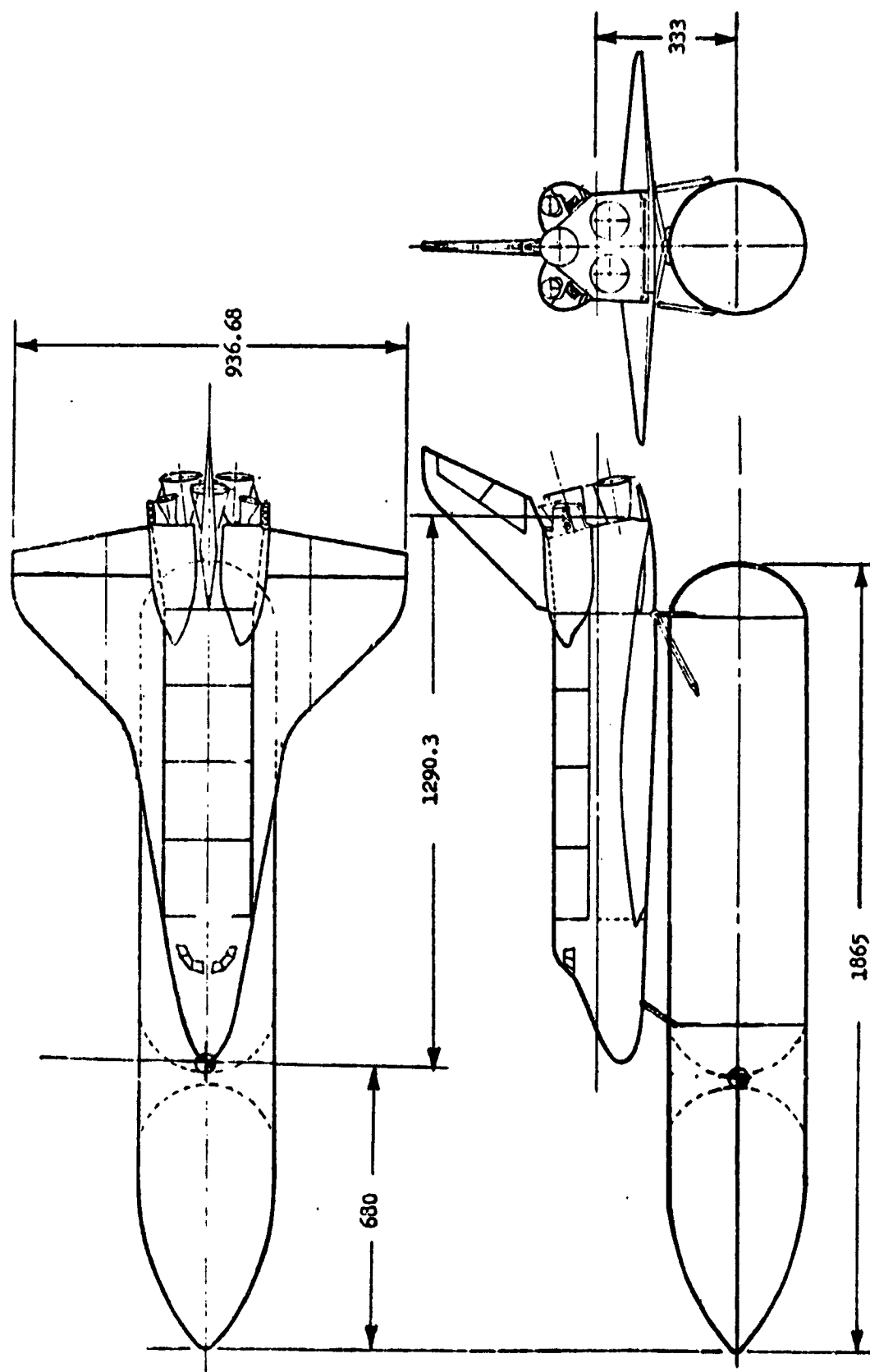
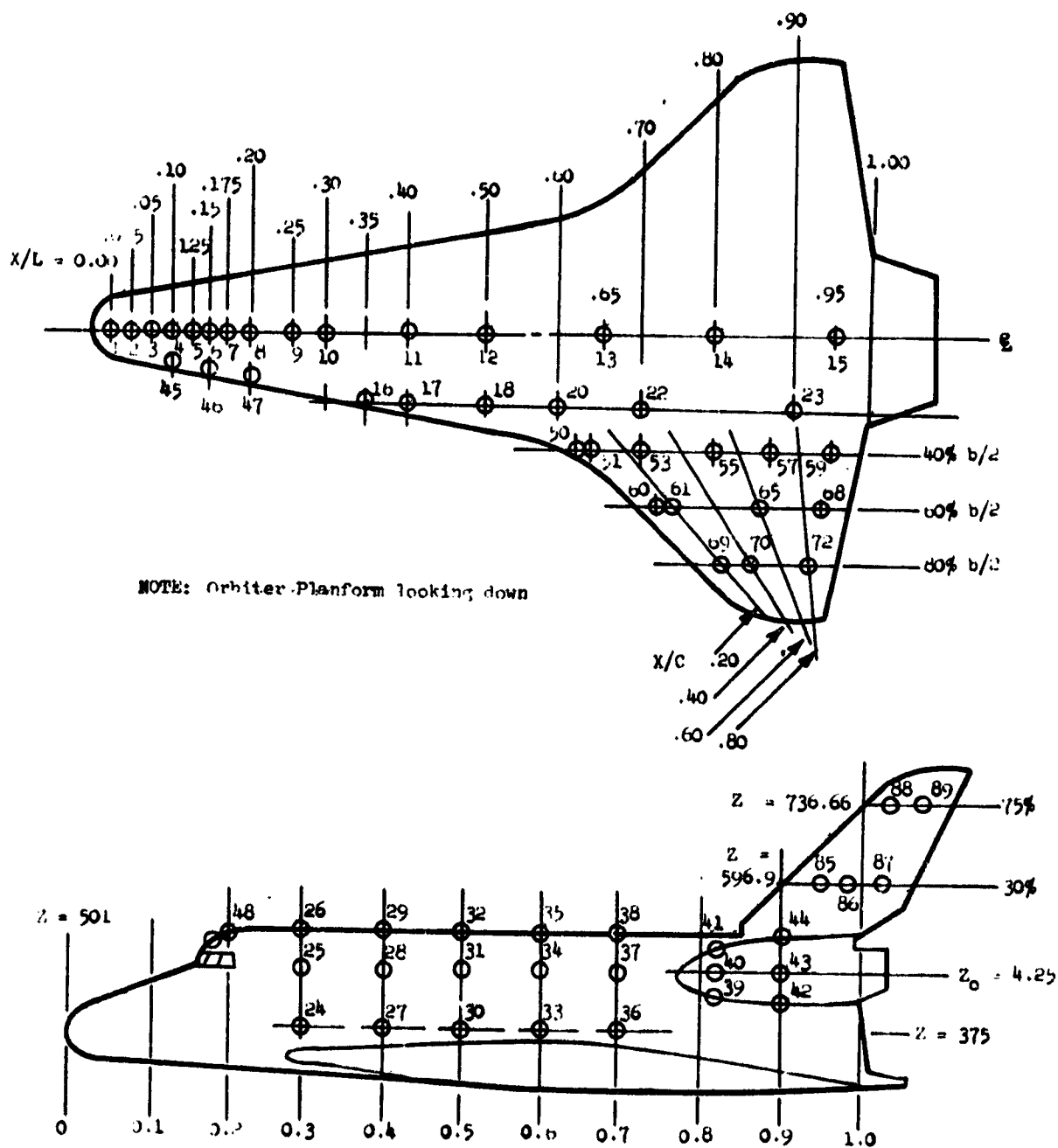
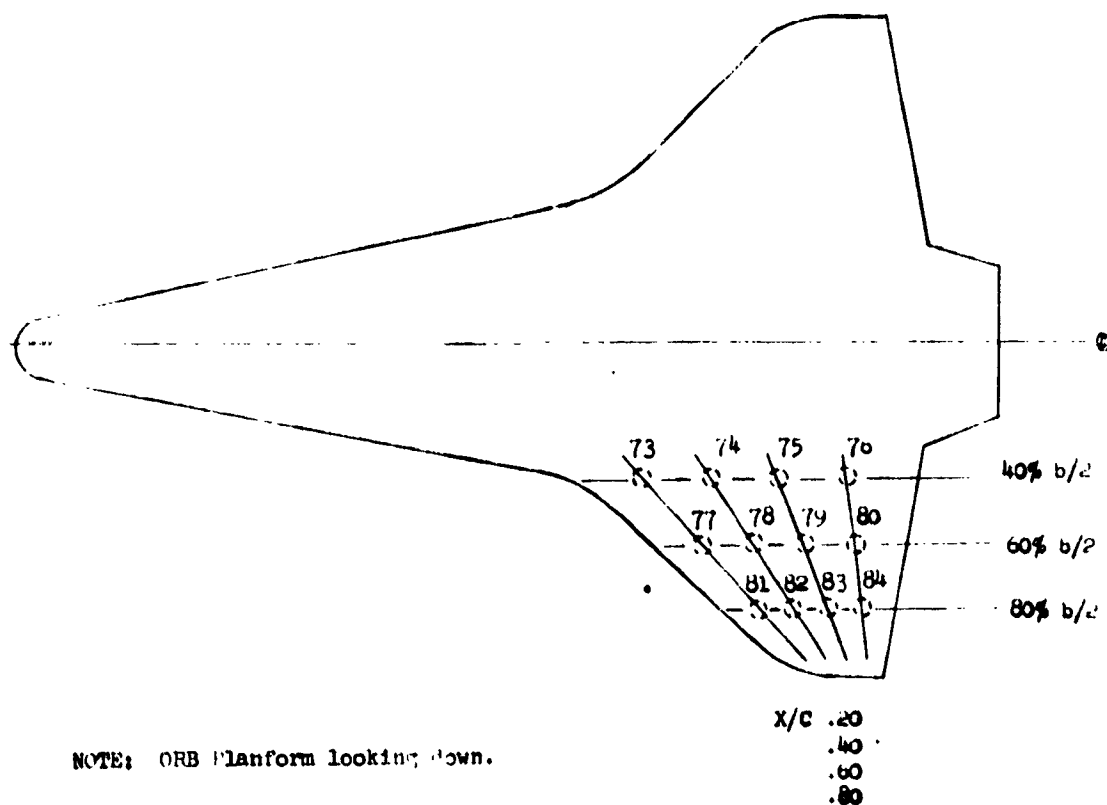


Figure 1. Orbiter/External Tank General Layout

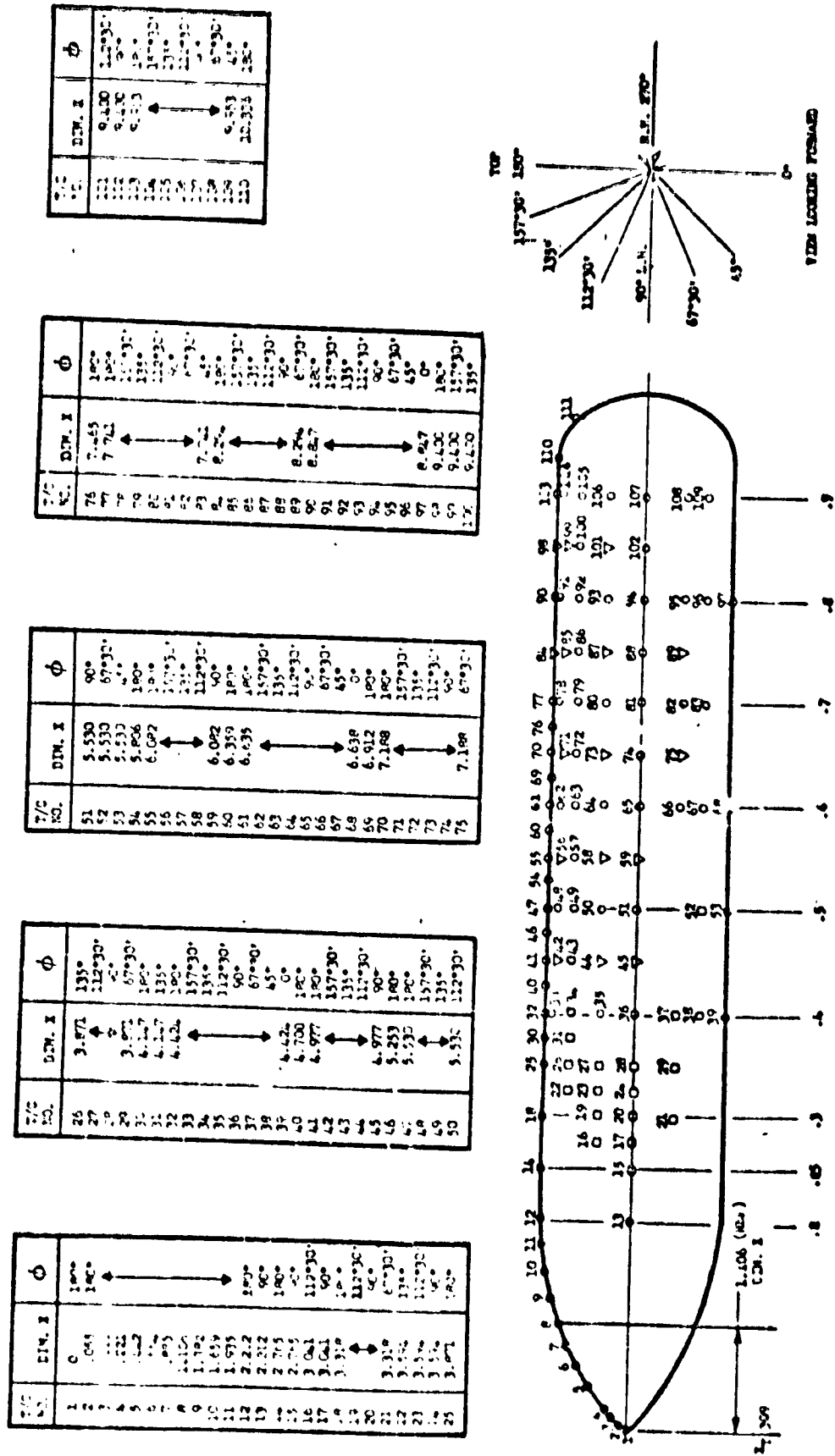


a. 50-0 Orbiter -- 147-B Configuration Thermocouple Locations
Figure 2. Model Instrumentation Sketches

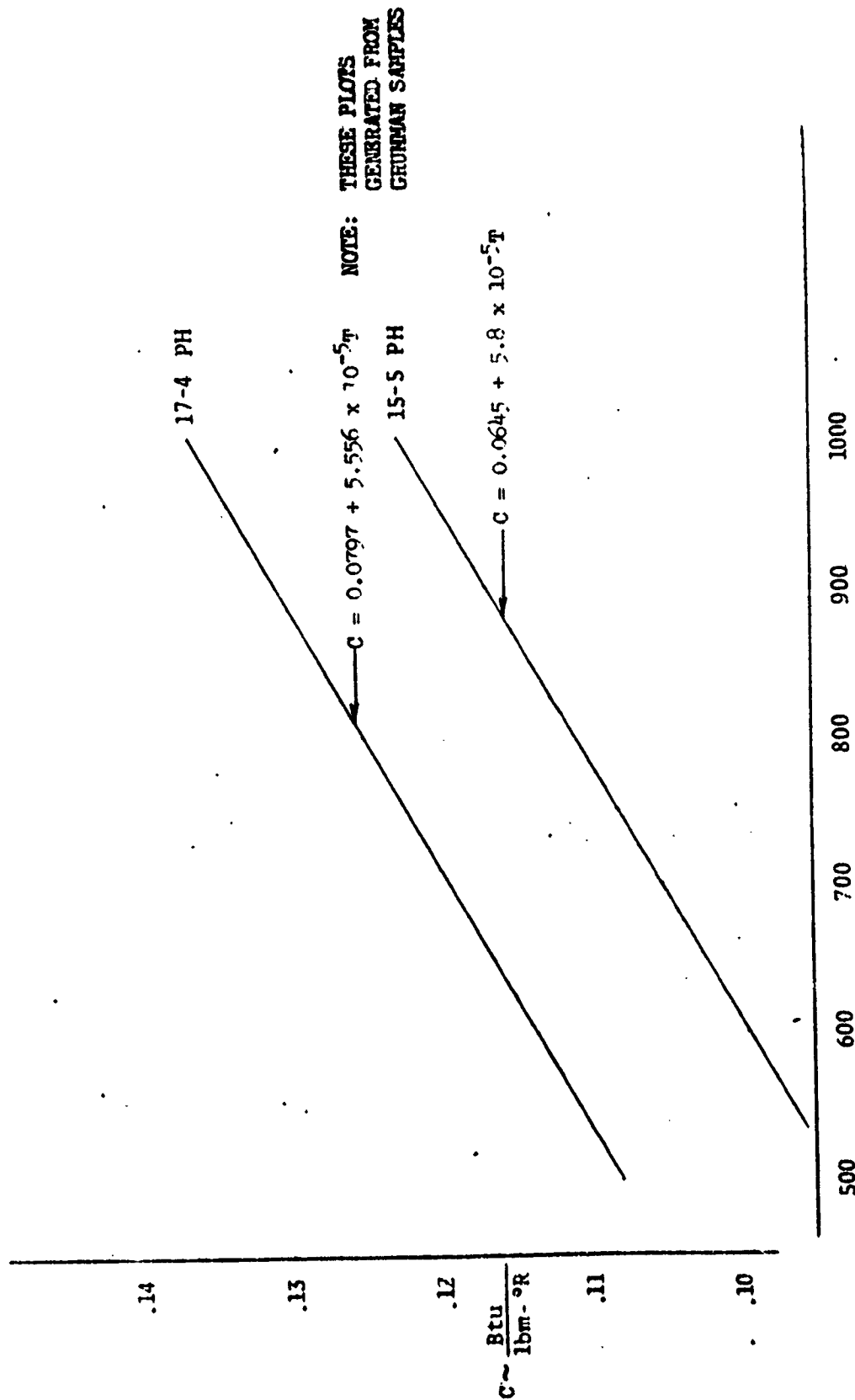
Upper Surface (Left Wing) Instrumentation



a. 50-0 orbiter -- 147-B Configuration Thermocouple Locations
Figure 2. Model Instrumentation Sketches (Conclude 1).

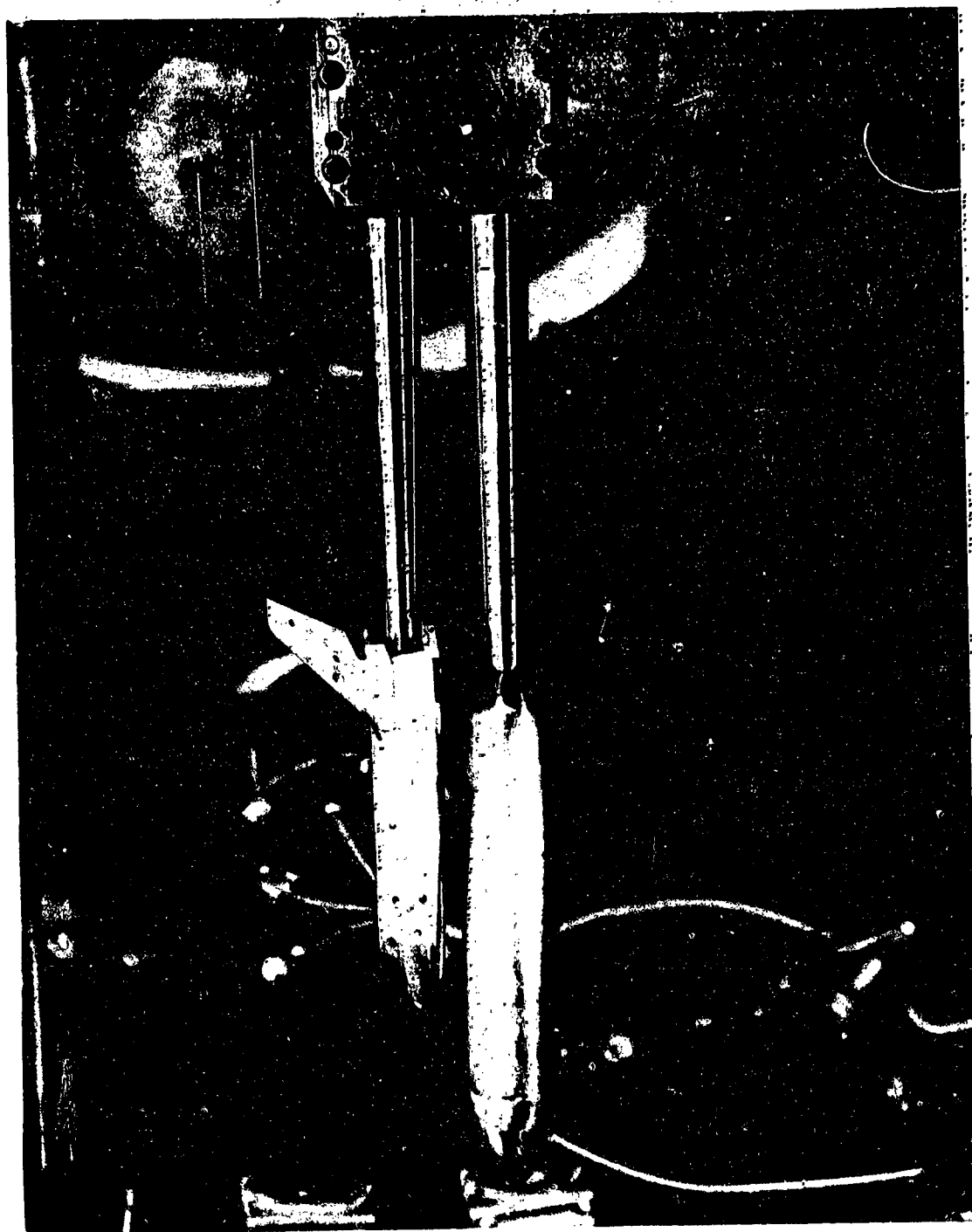


6. -1-T 0.00x-scale External Tank T/C Locations
Figure 6. Model Instrumentation Sketches

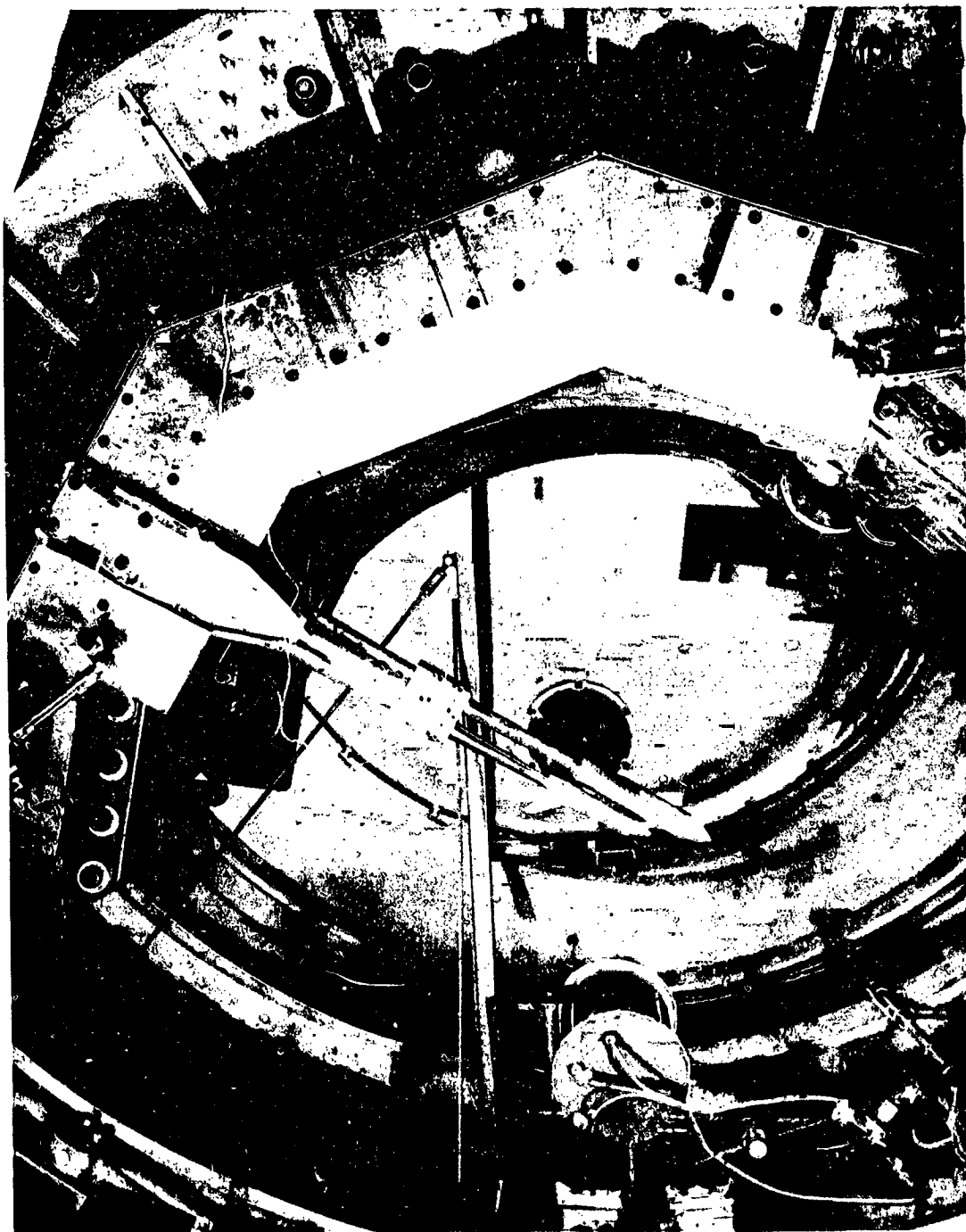


c. Specific Heat vs. Temperature for 17-4PH and 15-5PH stainless steel

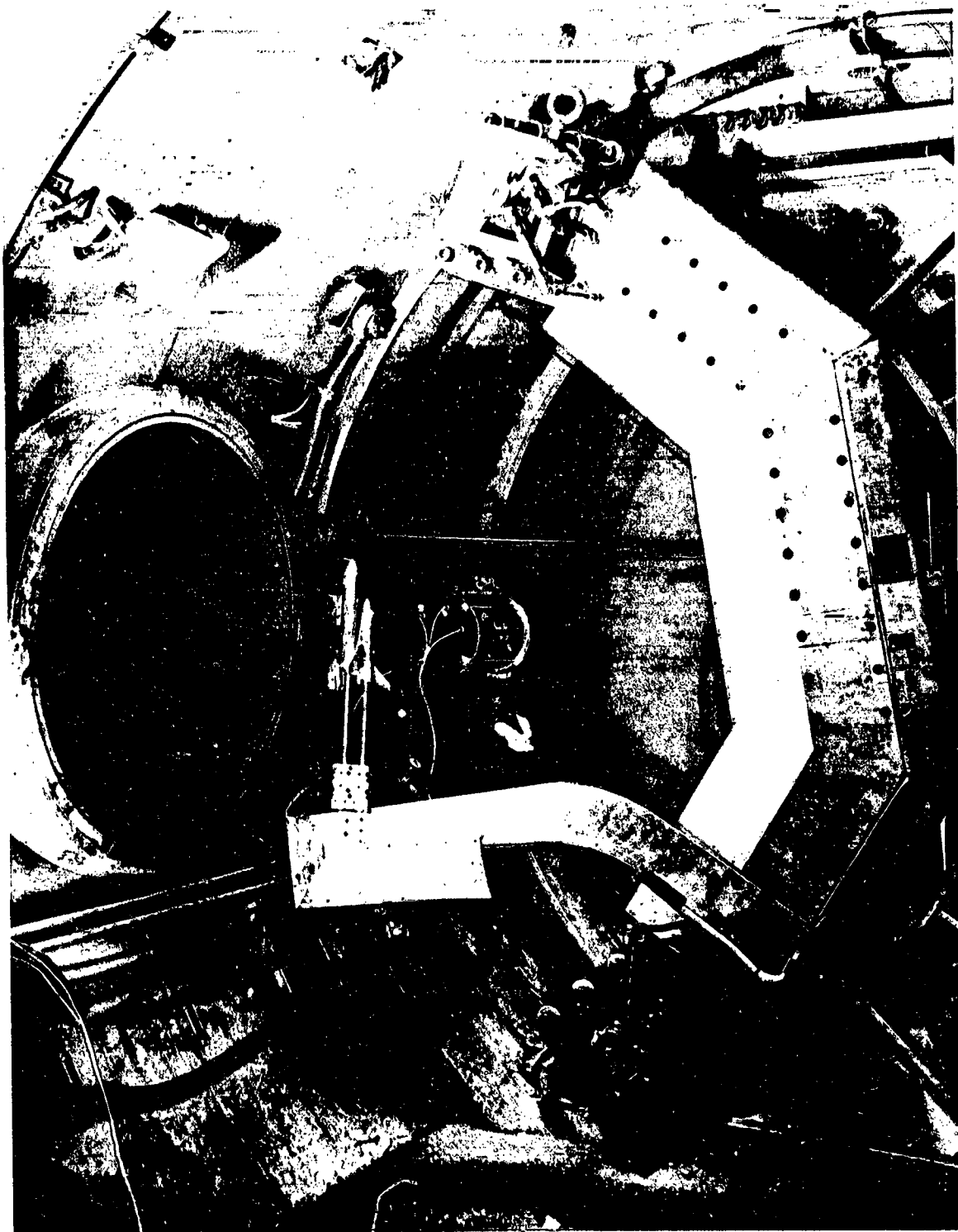
Figure 2. Model Instrumentation Sketches



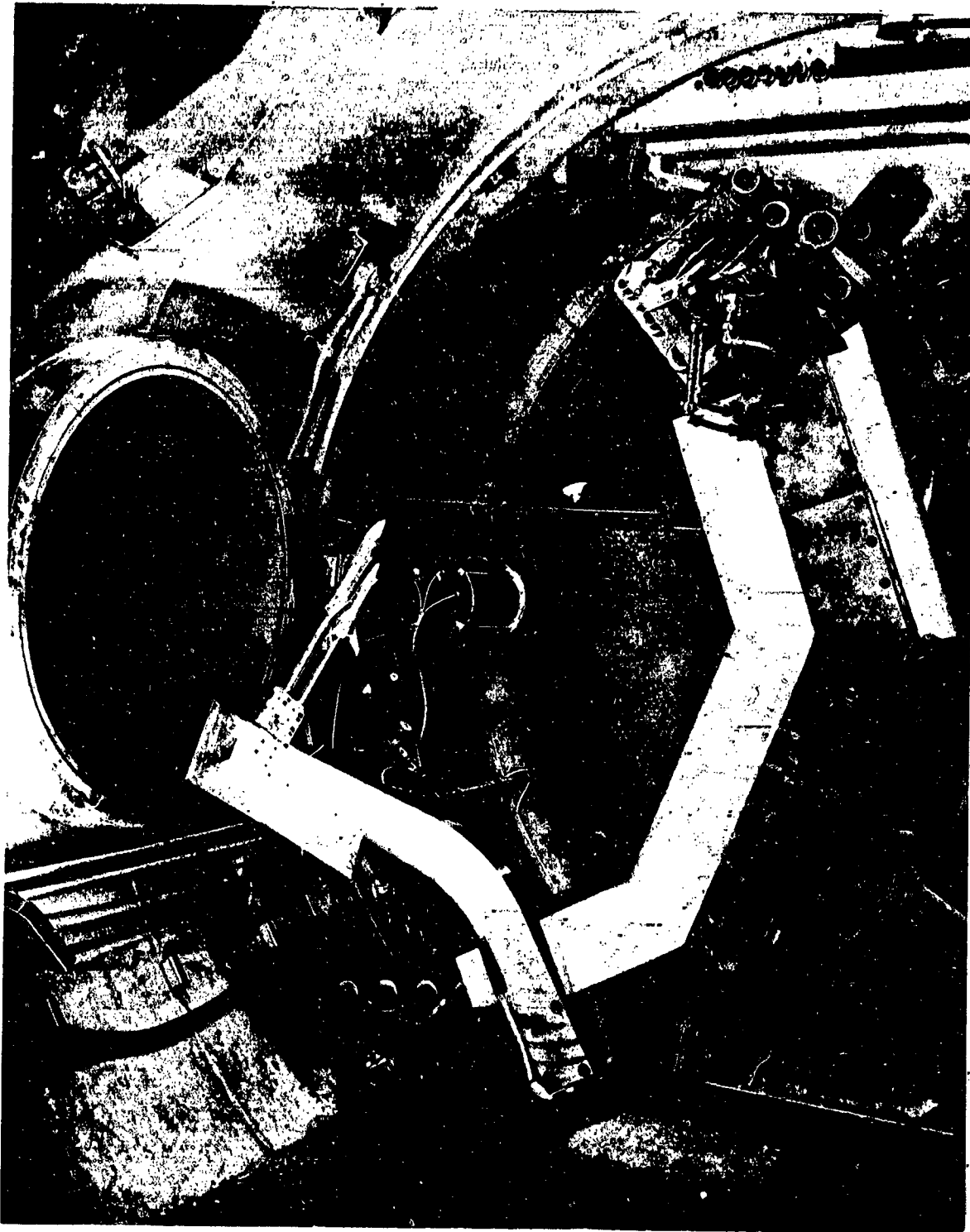
a. Orbiter/Tank at 0.0 degrees
Figure 3. Model Installation Photographs



b. Orbiter/Tank at -60.0 degrees
Figure 3. Model Installation Photographs



c. Orbiter/Tank at 90.0 degrees
Figure 3. Model Installation Photographs



d. Orbiter/Tank at 120.0 degrees
Figure 3. Model Installation Photographs

DATA FIGURES

Volume 1 - Figures 4-15

Volume 2 - Figures 16-27

SYMBOL
 ◊
 □
 ○

HAW/HT CHINE MACH
 .850 1.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA .000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

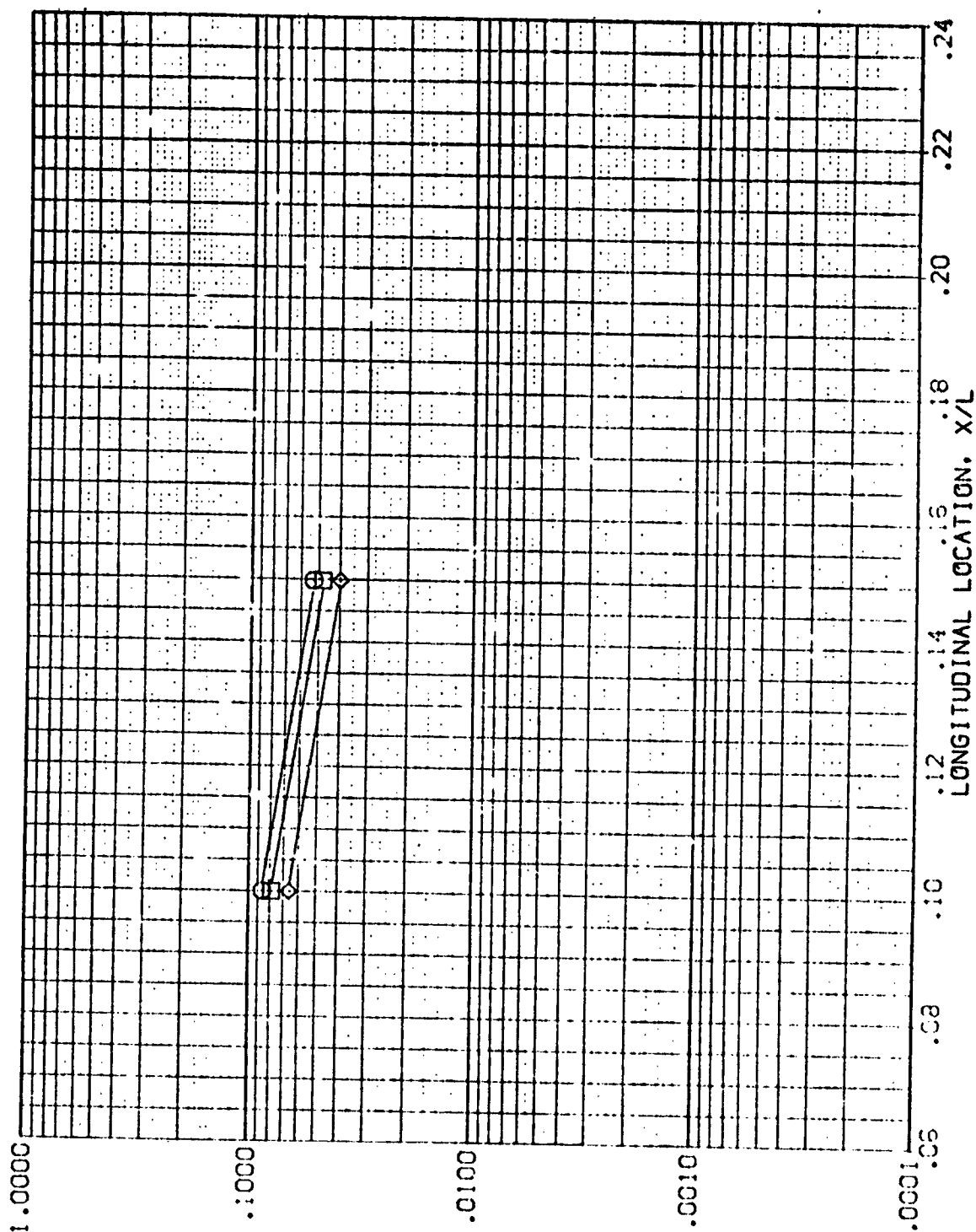


FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 IH28 01 CHINE

(REVD20)

SYMBOL
 ◊
 □
 ○

HAW/HT CHINE MACH
 .850 1.000 5.219
 .900
 1.000

PARAMETRIC VALUES
 ALPHA RN/L BETA
 -3.000 1.000 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

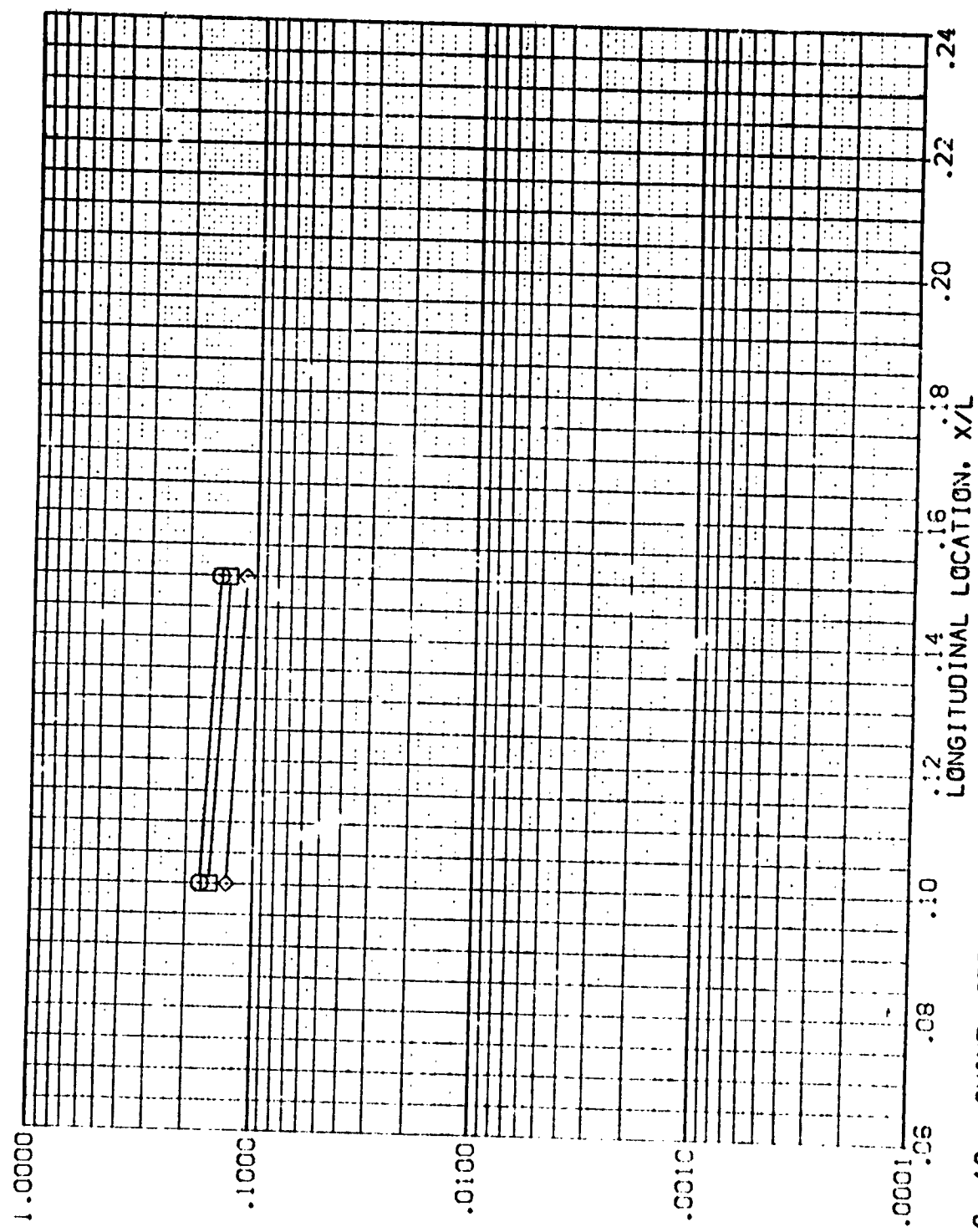


FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 1H28 01 CHINE

(REV D21)

SYMBOL
 ◇
 □
 ○

HAW/MT CHINE MACH
 .850 1.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 60.000 BETA .000
 1.000

ALPHA
 RN/L

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

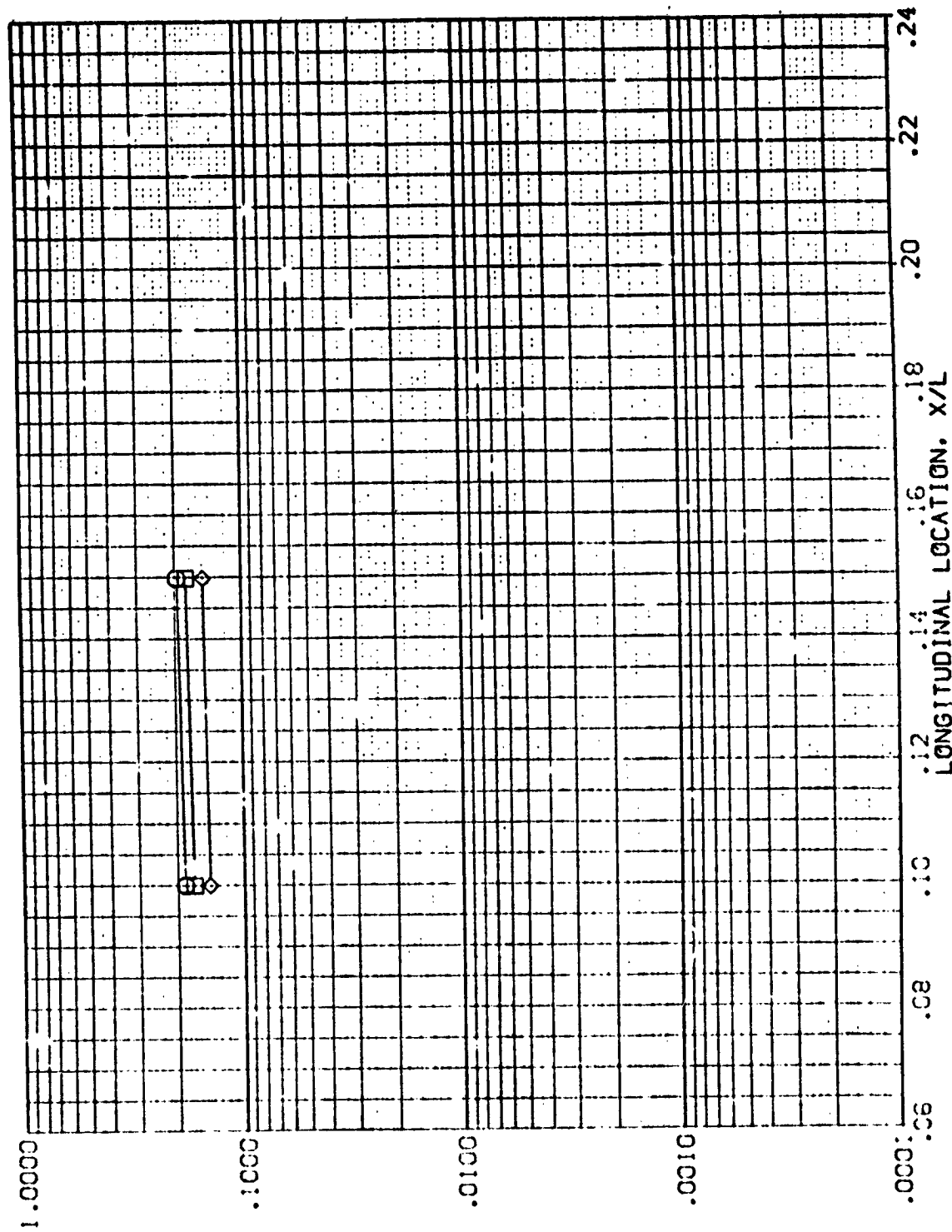


FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 1H28 01 CHINE

(REV D22)

SYMBOL
☐ ☐ ☐ ☐

HAW/WT CHINE MACH
 .850 1.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 90.000 BETA .000
 RV/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

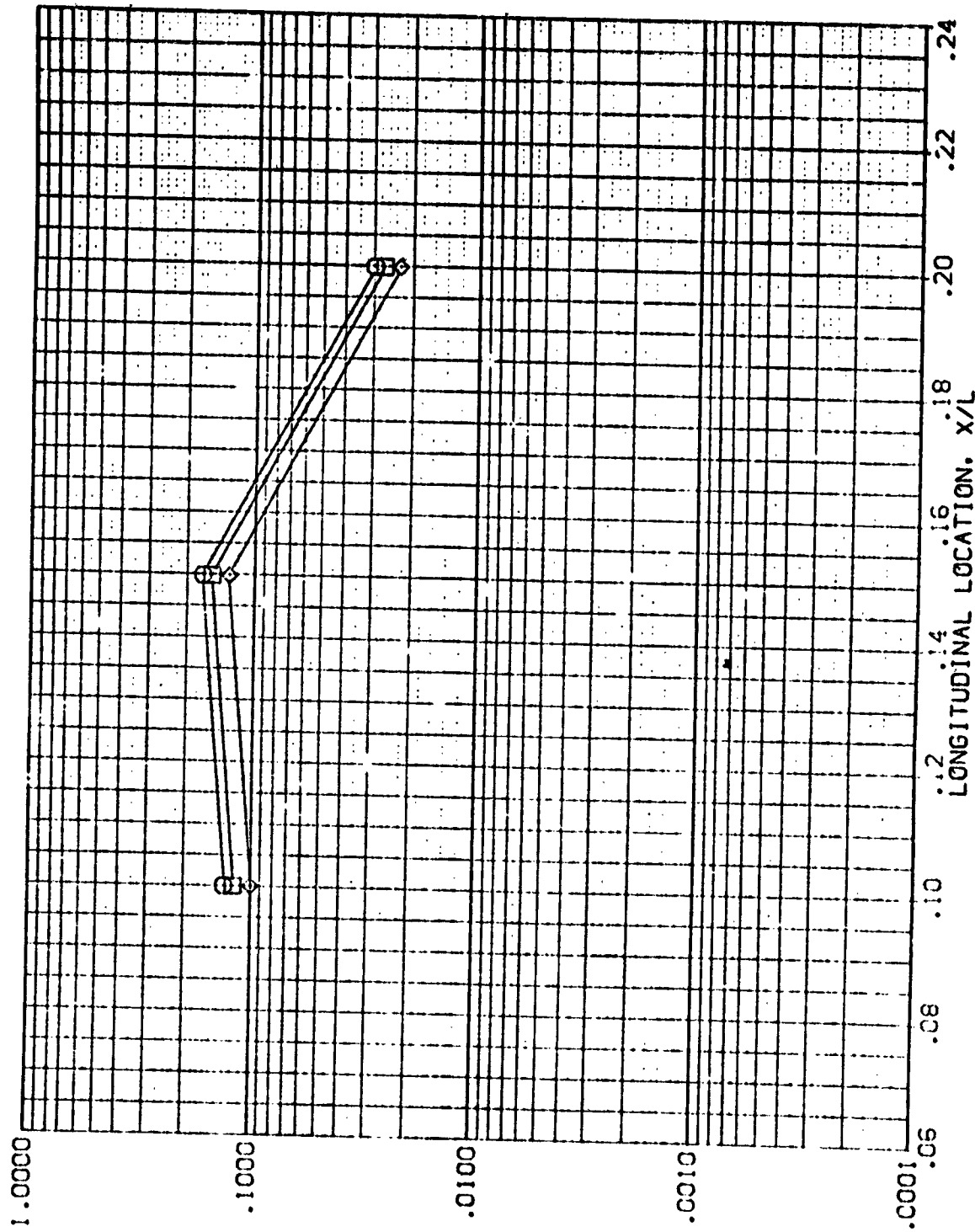


FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 IH28 31 CHINE

(REV D23)

SYMBOL

☐ .850
☐ .900
☐ 1.000

HAN/HT CHINE MACH
 .850 1.000 5.220
 .900
 1.000

PARAMETRIC VALUES

ALPHA 120.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

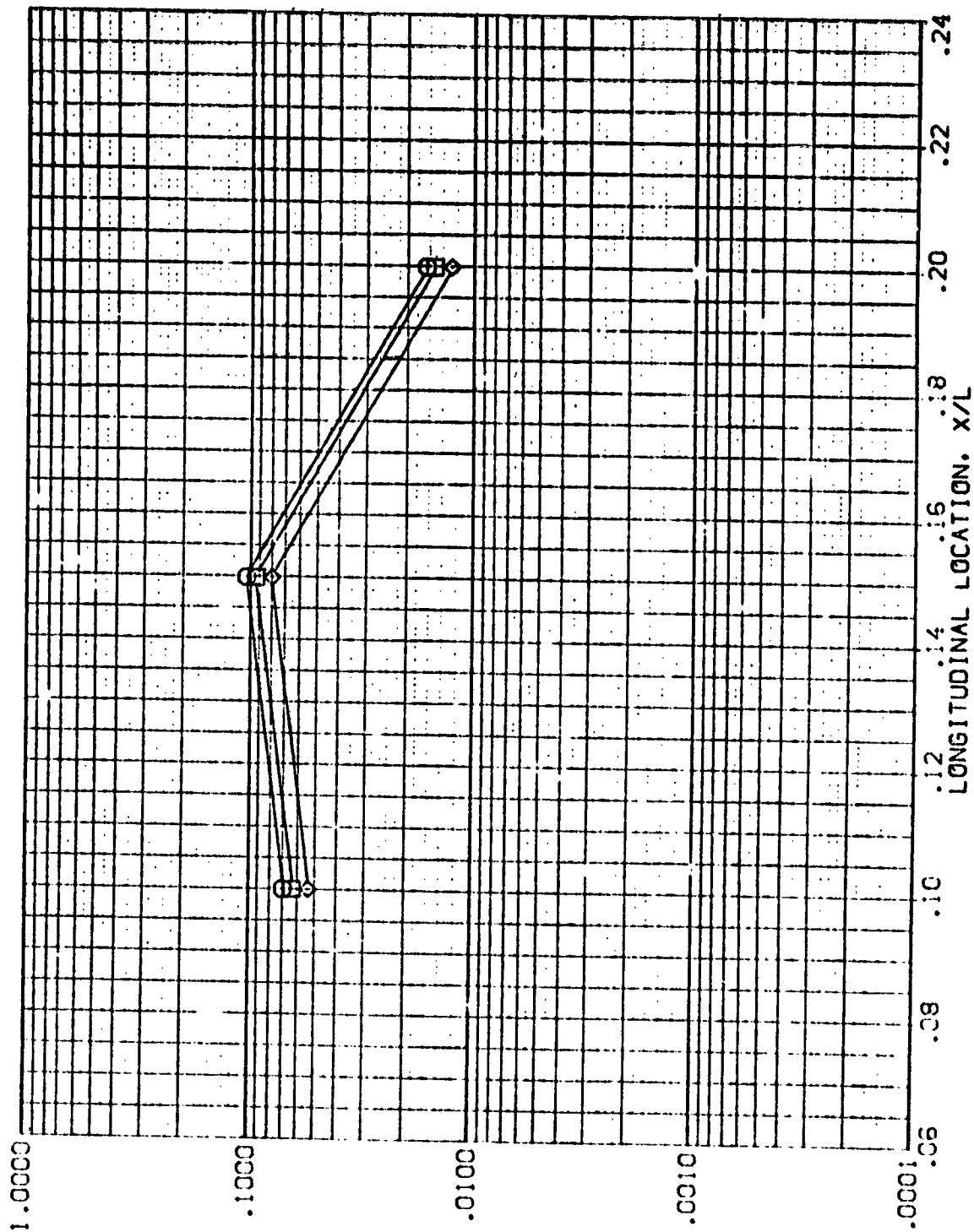


FIG. 16 CHINE, ORBITER ALONE

AYES 3.5-195 1428 01 CHINE

(REVD24)

SYMBOL
 □
 ◇

HAS/HT CHINE MACH
 .550 1.000 5.220
 .900 1.000

PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RW/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

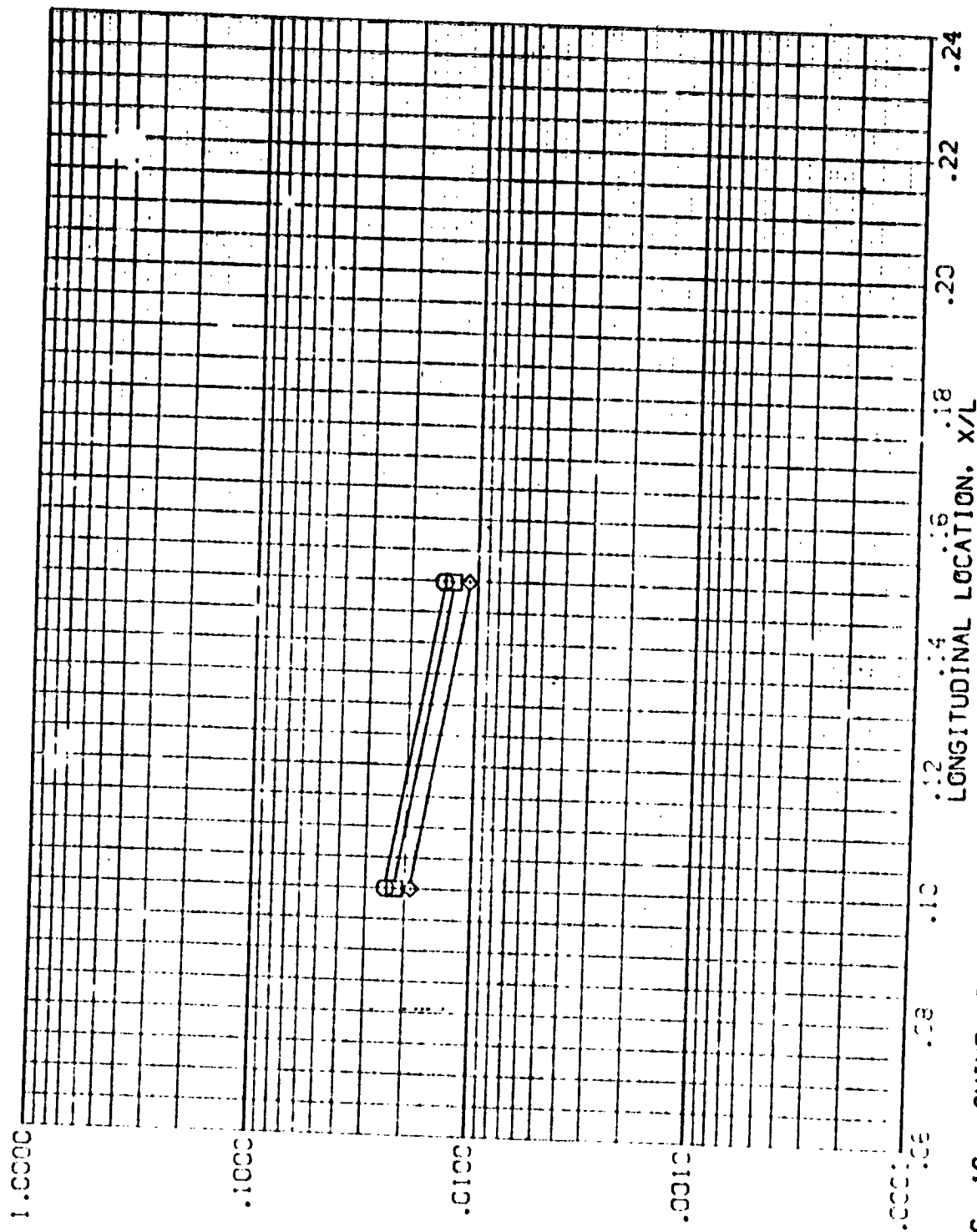


FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 IH28 01 CHINE

(REVD25)

SYMBOLS
 HAW/WT
 CHINE
 MACH
 1.000
 5.219
 .850
 .900
 1.000

PARAMETRIC VALUES
 ALPHA
 RM/L
 BETA
 1.000
 .000

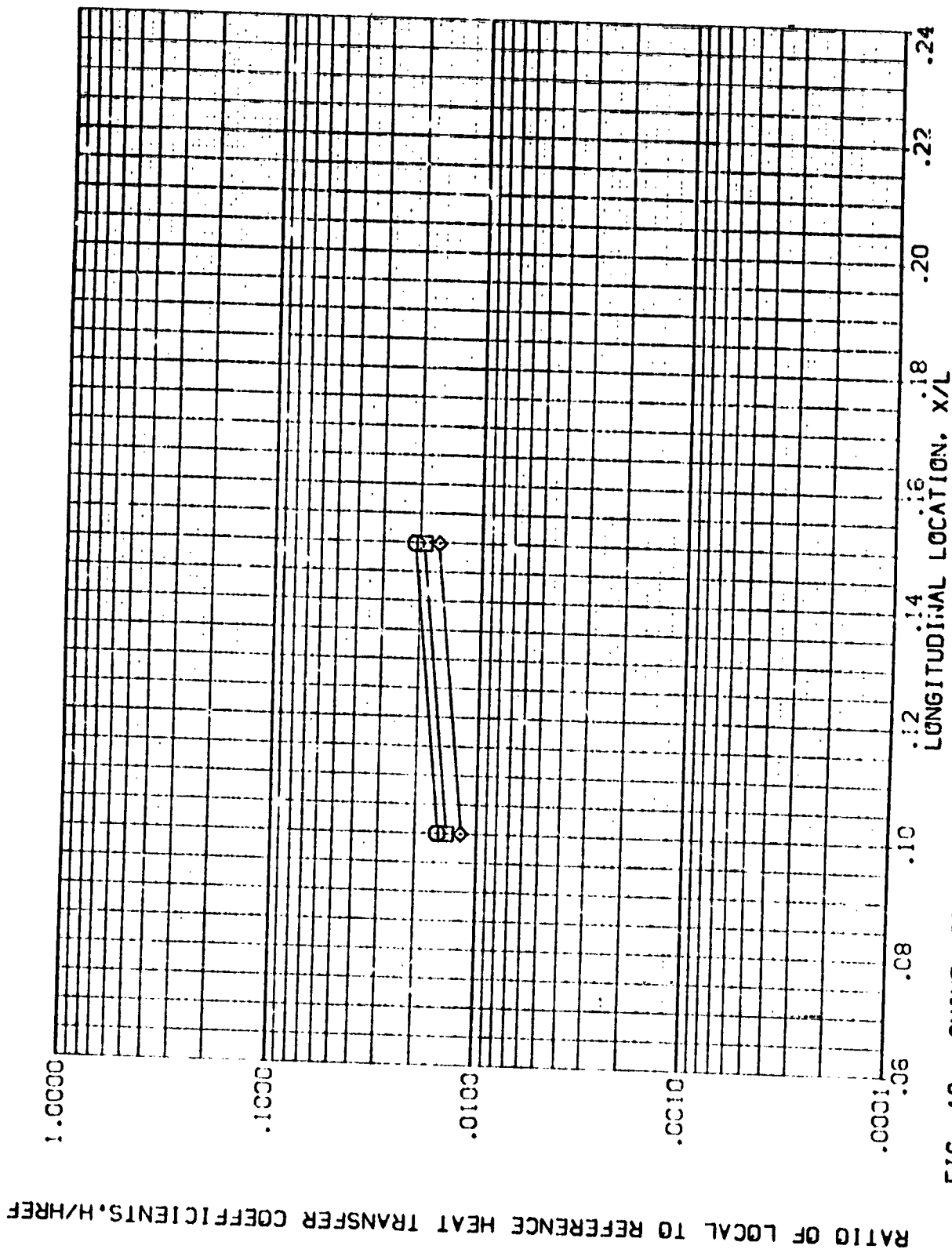


FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-:95 IH28 01 CHINE

(REVD26)

PARAMETRIC VALUES
ALPHA -60.000 BETA .000
RN/L 1.000

SYMBOL HAM/HT CHINE MACH
◇ .850 1.000 5.720
○ .950
□ 1.000

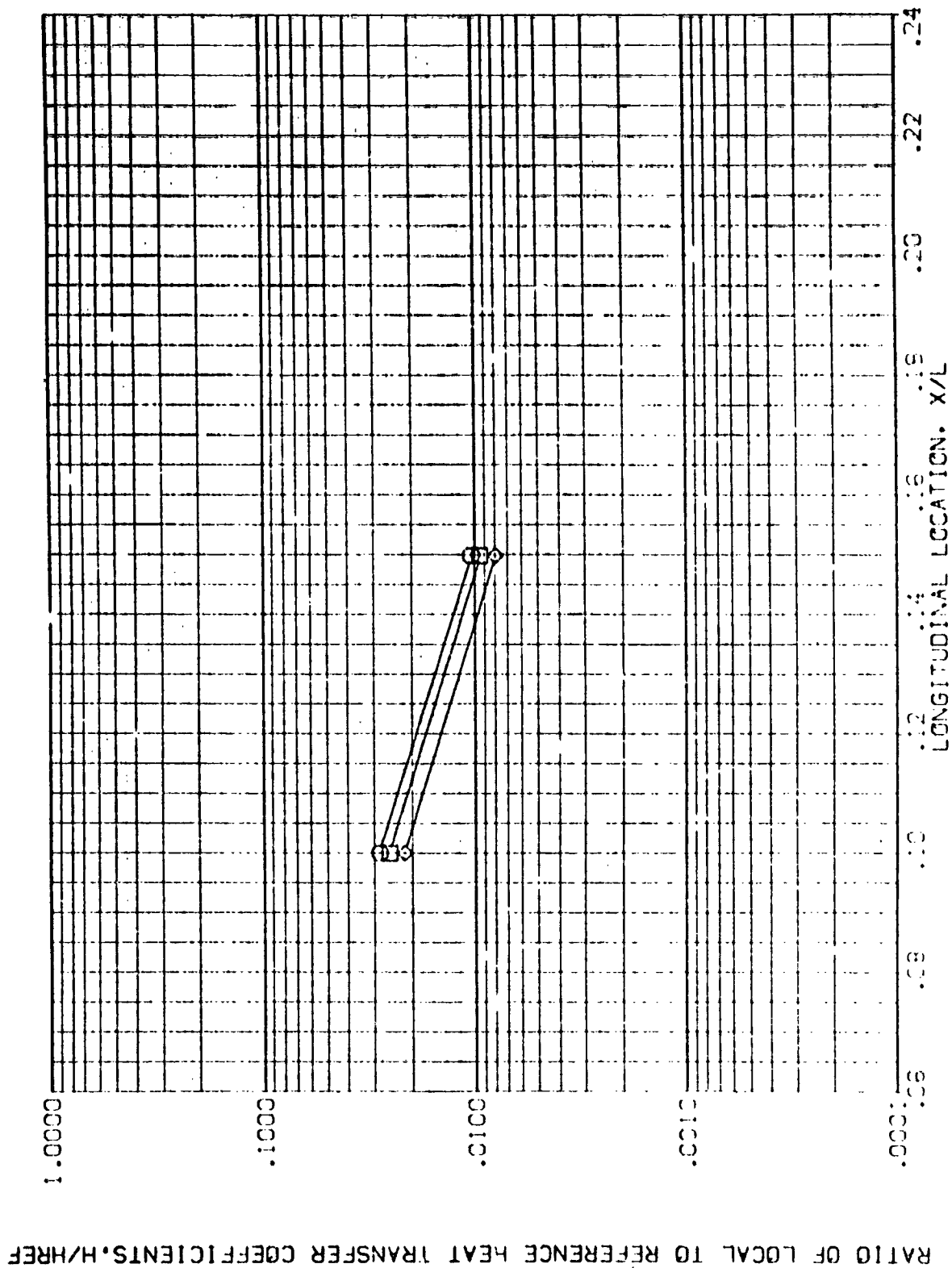


FIG. 16 CHINE ORBITER ABOVE

AMES 3.5-195 IH28 Q1 CHINE

[REVD27]

Symbol

030-1
006-
058-
HAW/HIT

COO-1
ENGINE

MACH 5.22

ACH
5.220

ACH
5.220

ALPHA
RN/L

ALPHA
RN/L

PARAMETRIC VALUES

PARAMETRIC VALUE
-30.000 BETA
1.000

PARAMETRIC VALUE
-30.000 BETA
1.000

PARAMETRIC VALUE
-30.000 BETA
1.000

0000

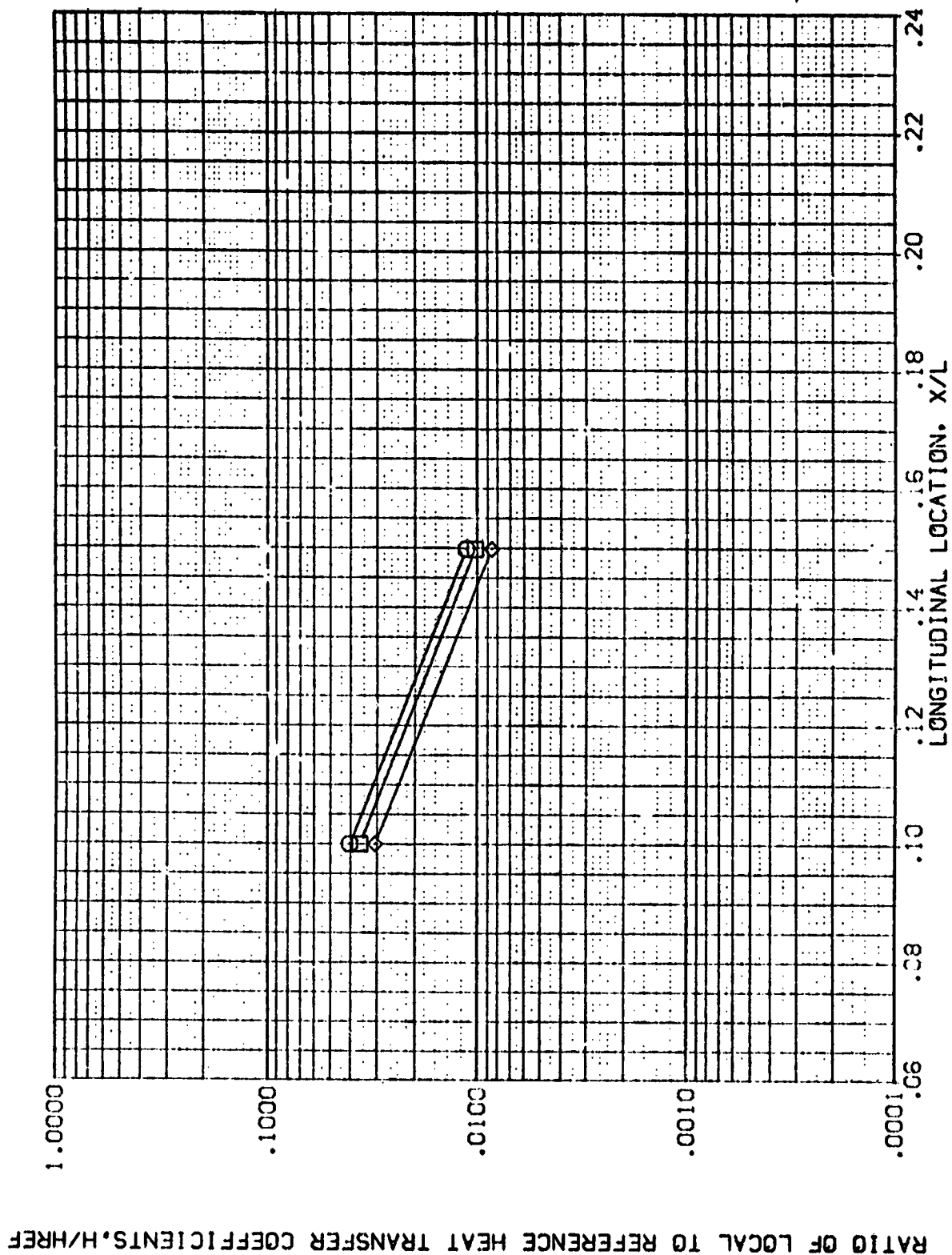


FIG. 16 CHINE, ORBITER ALONE

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(REV019)	AMES 3.5-195 1H28 01	CHINE
(REV020)	AMES 3.5-195 1H28 01	CHINE
(REV021)	AMES 3.5-195 1H28 01	CHINE
(REV022)	AMES 3.5-195 1H28 01	CHINE
(REV023)	AMES 3.5-195 1H28 01	CHINE

ALPHA	BETA	RN/L
.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
90.000	.000	1.000
120.000	.000	1.000

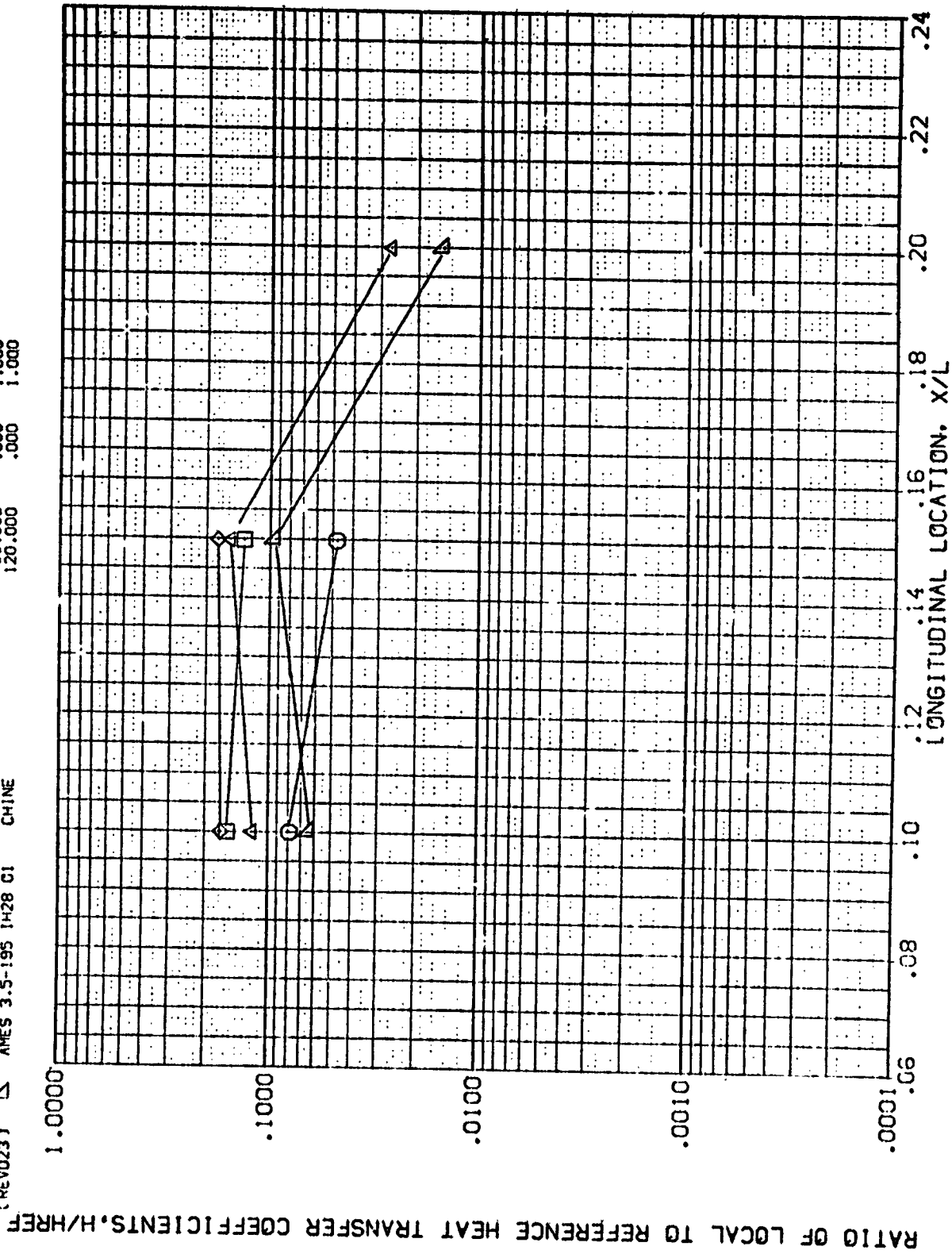


FIG. 16 CHINE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 CHINE = 1.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (SE 019) ASES 3.5-185 1428 CI CHINE
 (SE 020) ASES 3.5-185 1428 CI CHINE
 (SE 021) ASES 3.5-185 1428 CI CHINE
 (SE 022) ASES 3.5-185 1428 CI CHINE
 (SE 023) ASES 3.5-185 1428 CI CHINE
 (SE 024) ASES 3.5-185 1428 CI CHINE

ALPHA BETA RM/L
 .000 .000 1.000
 -30.000 .000 1.000
 -60.000 .000 1.000
 -90.000 .000 1.000
 -120.000 .000 1.000

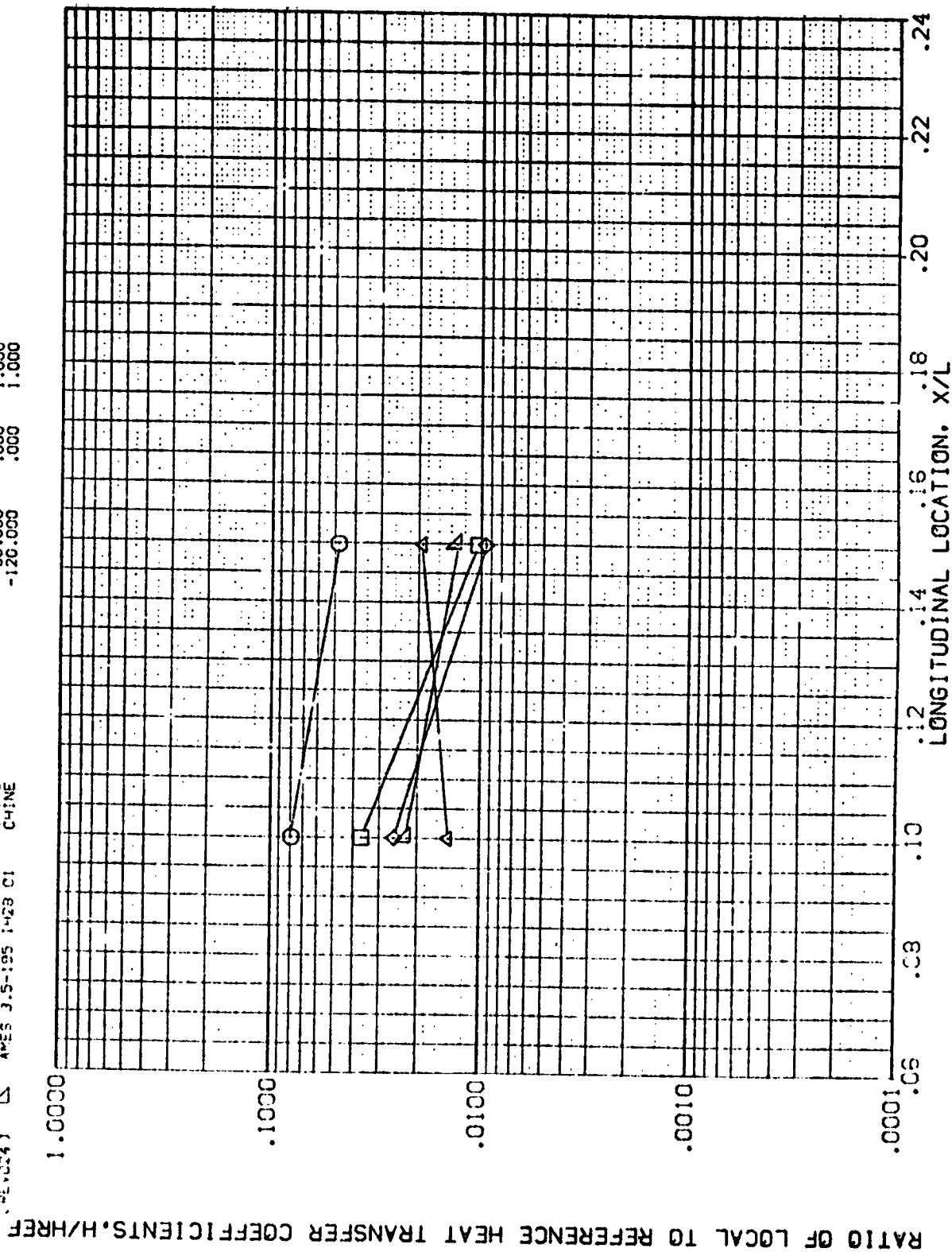


FIG. 16 CHINE, ORBITER ALONE

MACH = 5.300 μ AW/HT = .900 CHINE = 1.000

AMES 3.5-195 IH28 01+T: CHINE

(REV D01)

SYMBOL	HAW/HT	CHINE	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	1.000	5.228	.000	.000
□	.900			1.000	
◇	1.000				

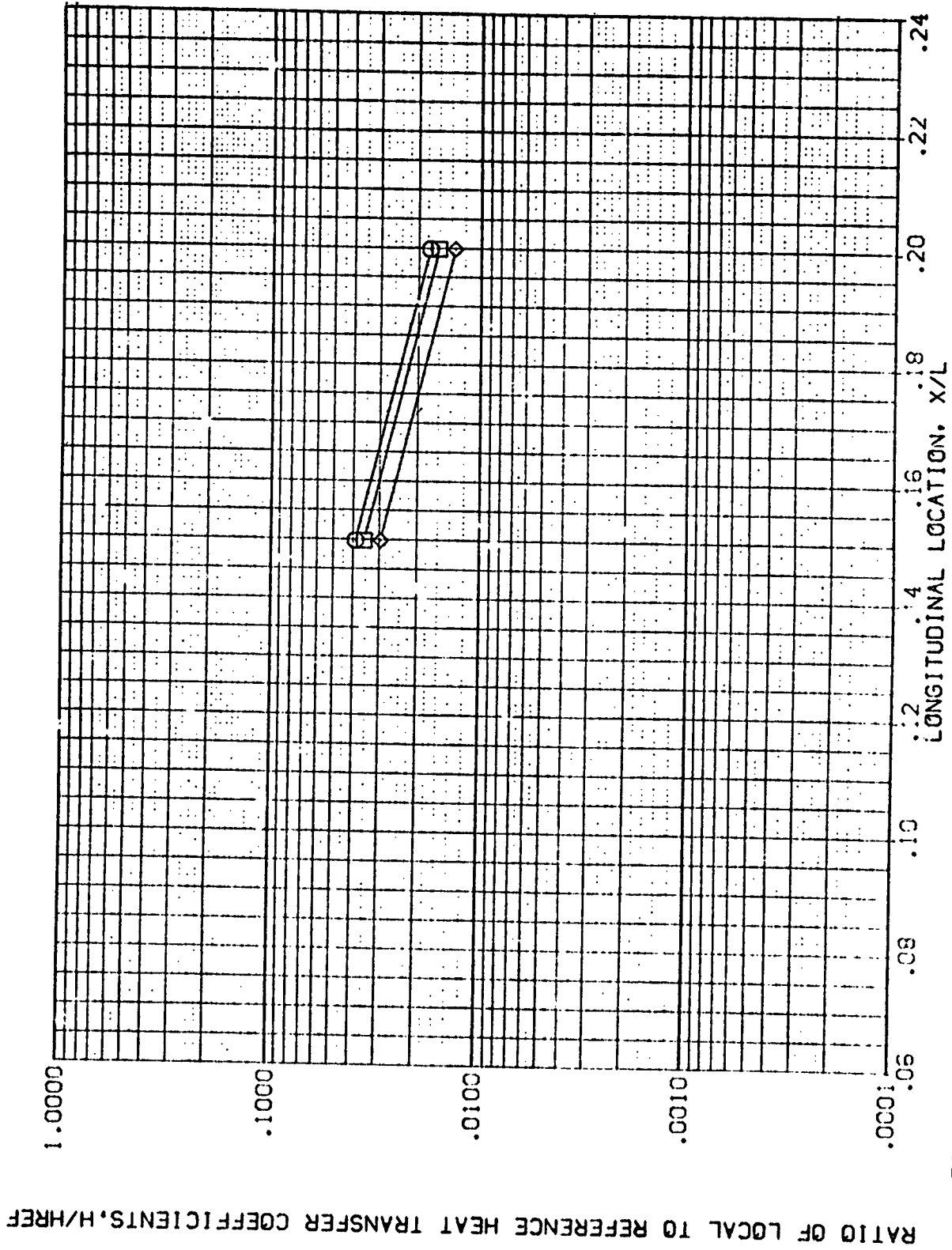


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

PARAMETRIC VALUES
 ALPHA 30.000 BETA .000
 RN/L 1.000

SYMBOL HAW/HT CHINE MACH
 □ .850 1.000 5.219
 ◇ .900 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

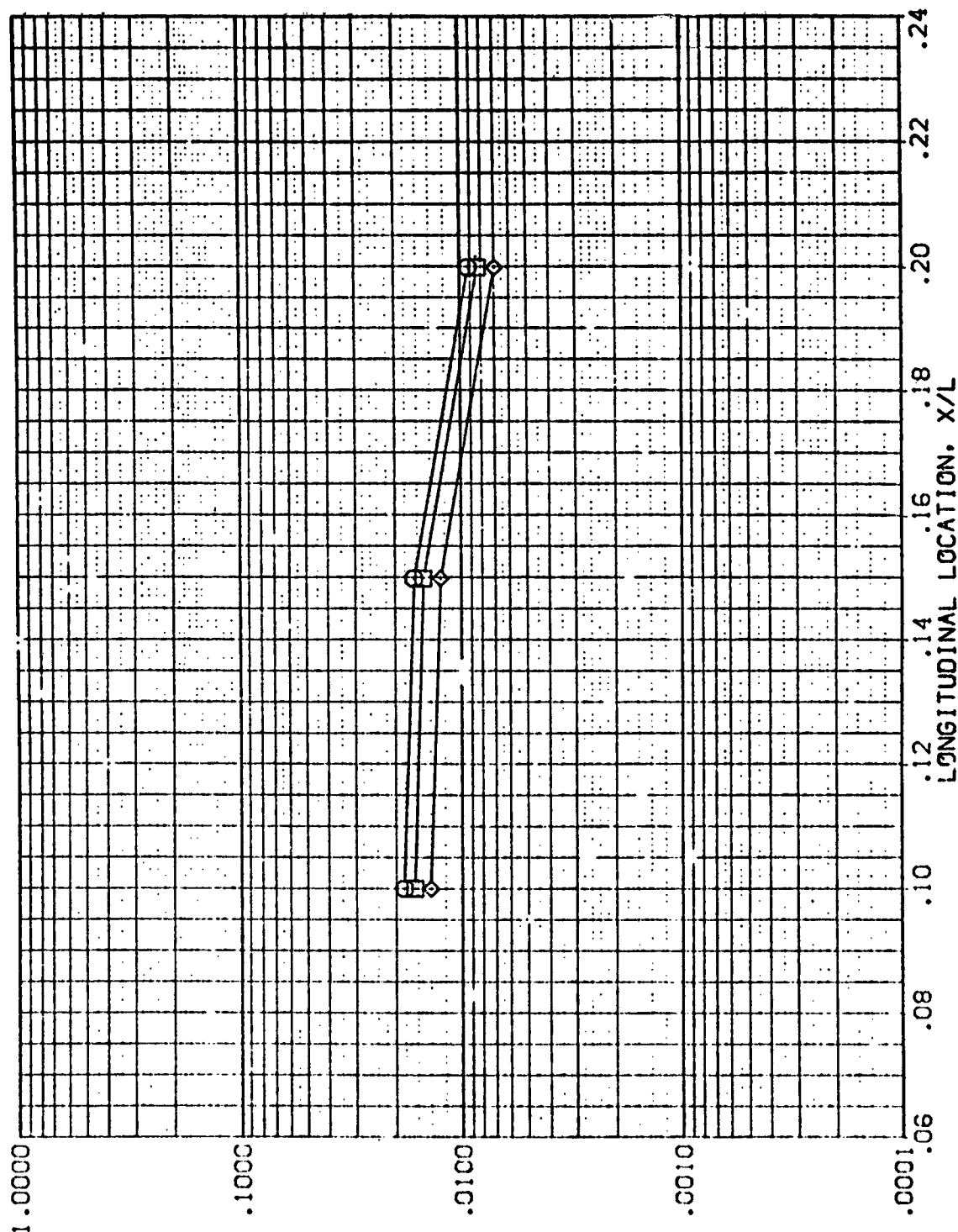


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 01+T1 CHINE

(REV003)

SYMBOL	HAW/HT	CHINE	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
□	.850	1.000	5.220	60.000	.000
◇	.900			1.000	
◇	1.000				

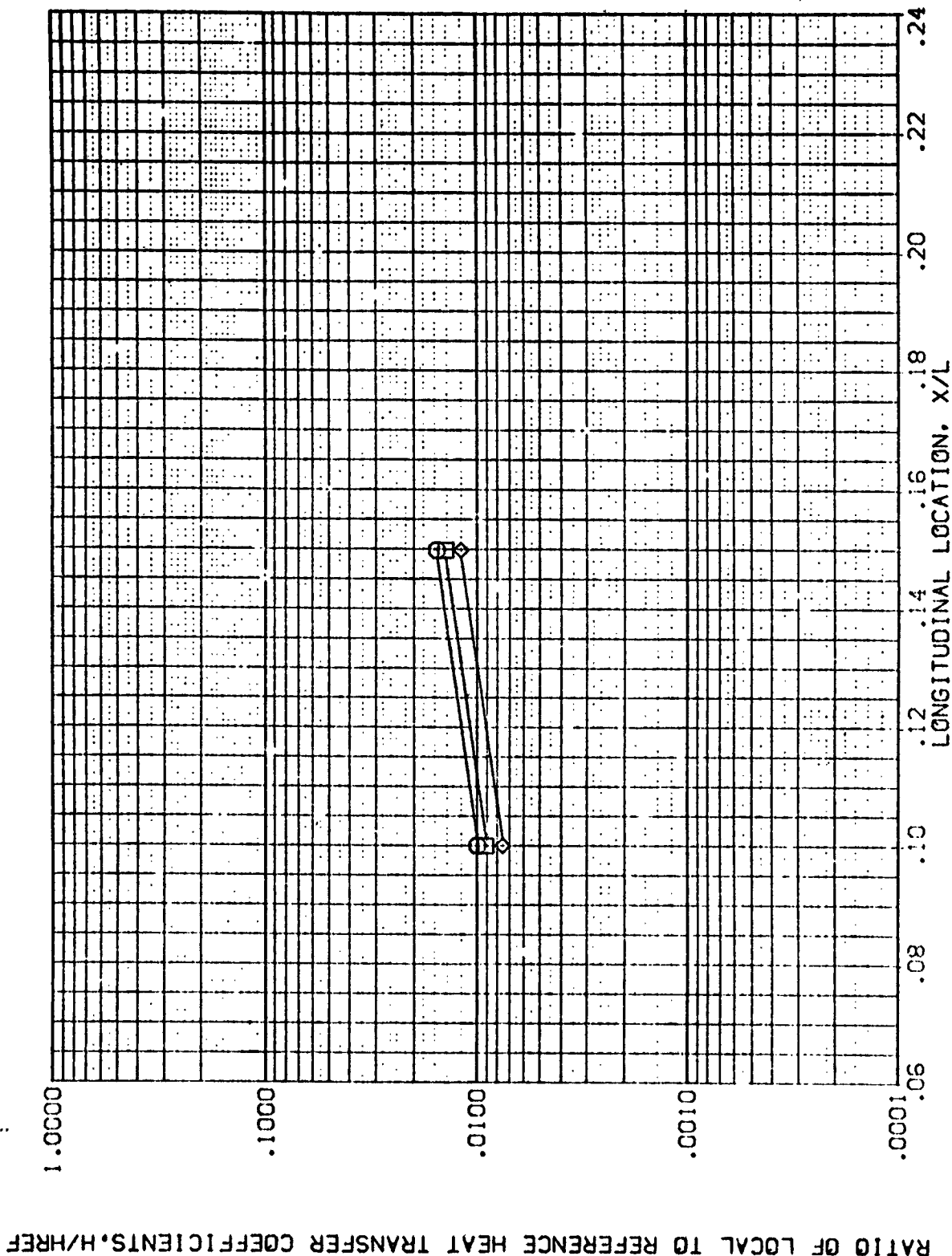


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 01+T1 CHINE

(REV004)

SYMBOL
 \square
 \diamond

HA/HT	CHINE	MACH
.850	1.000	5.219
.900		
1.000		

PARAMETRIC VALUES	
ALPHA	BETA
.3.000	.000
1.000	

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

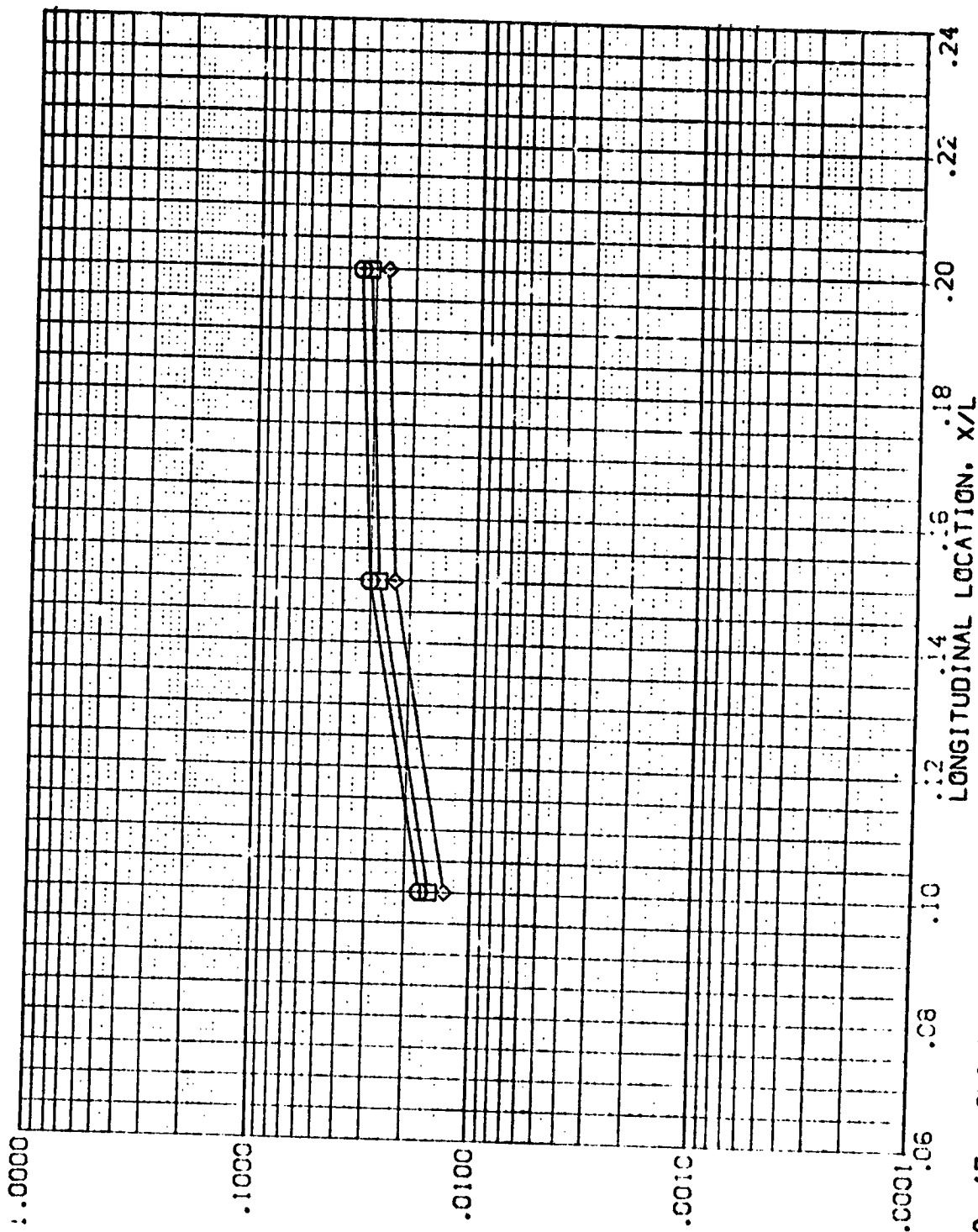


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 01+T1 CHINE

SYMBOL
 □
 ◇

WAV/WT CHINE MACH
 .850 1.000 5.220
 .900
 1.000

(REV005)

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RV/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

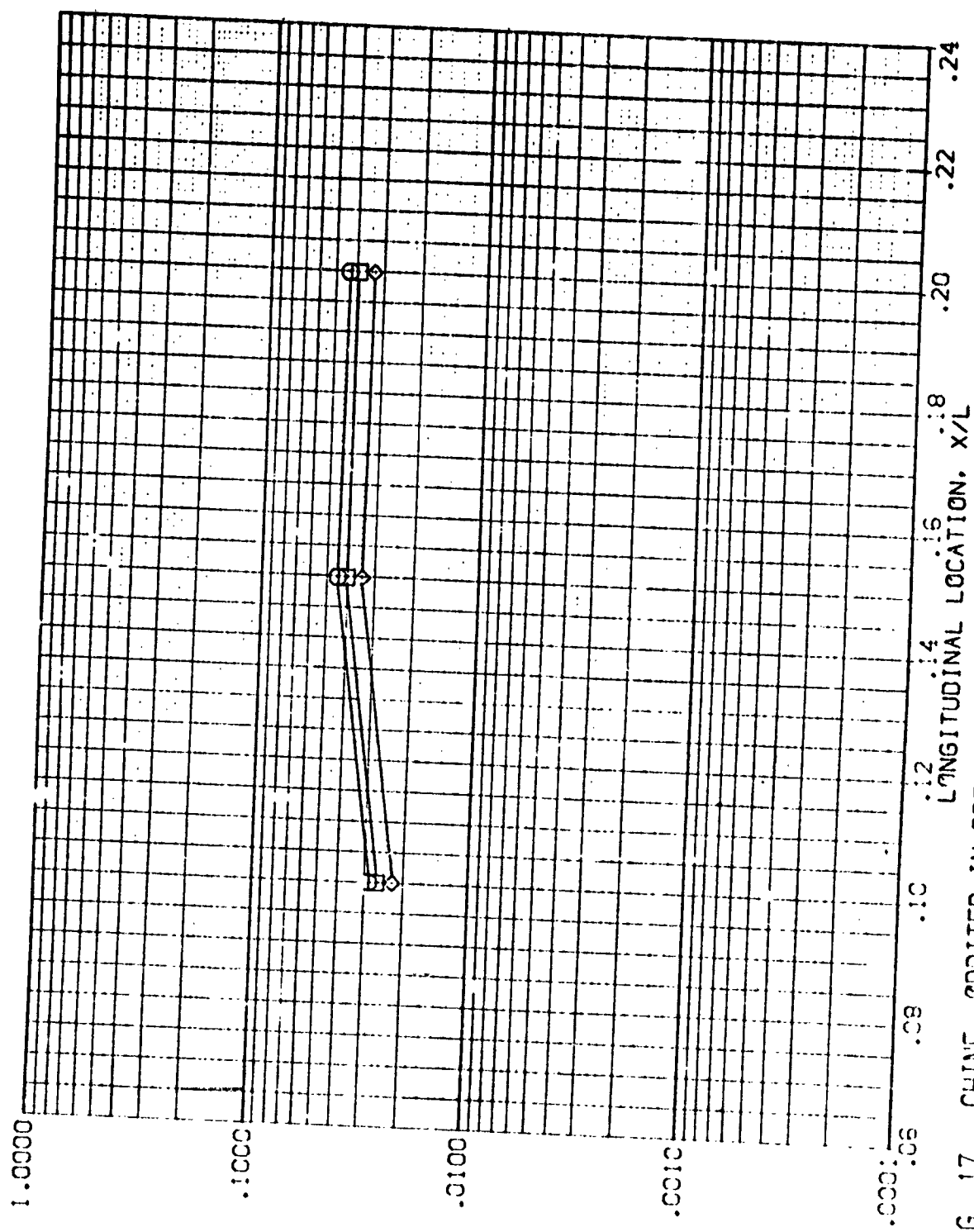


FIG. 17 CHINE, CRBITER IN PRESENCE OF THE TANK

AMES 3.5-:95 IH28 01+T1 CHINE

(REV D06)

SYMBOL HAN/HT CHINE MACH
 .850 1.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -0.000 BETA .000
 RH/L 1.000

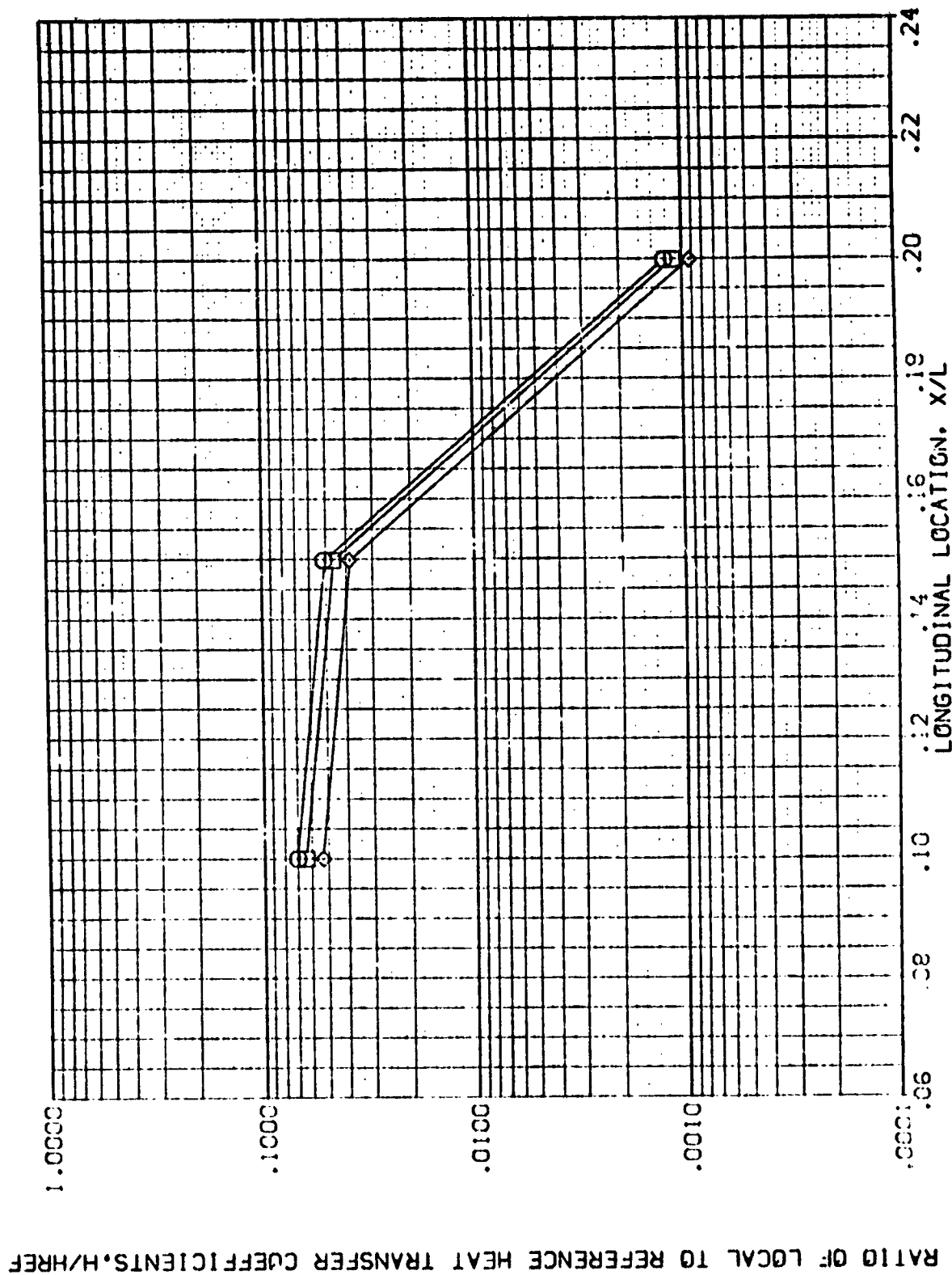


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 C1+T1 CHINE

(REV007)

SYMBOL
 □ □ □
 ○ ○ ○

MAN/HT CHINE MACH
 .850 1.000 5.2:9
 .900
 1.000

PARAMETRIC VALUES
 -90.000 BETA .000
 ALPHA
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

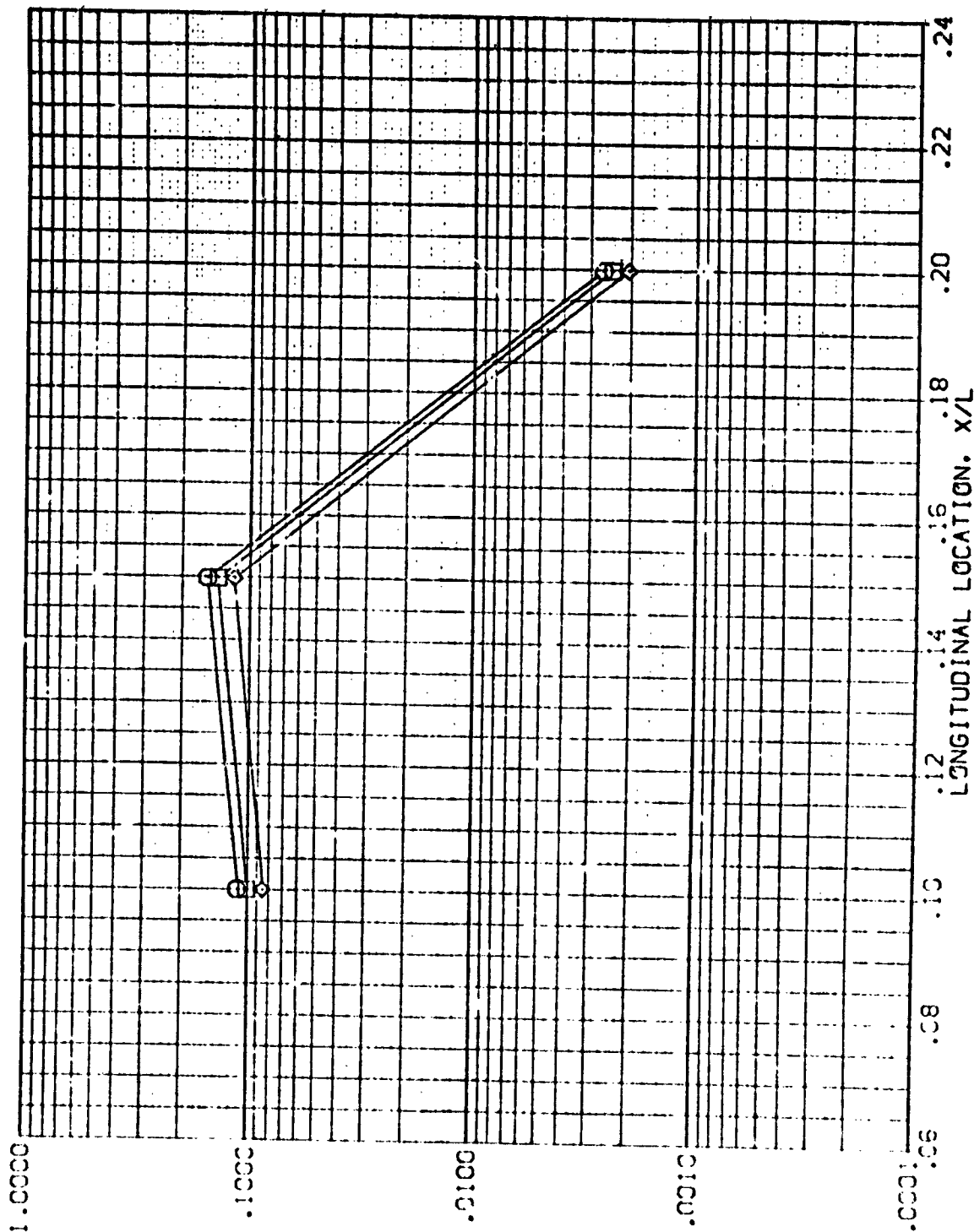


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AVES 3.5-195 IH28 C1+T1 CHINE

(REV008)

SYMBOL HAD/P/ CHINE MACH
 .850 1.000 5.220
 .900 1.000
 1.000

PARAMETRIC VALUES
 ALPHA -60.000 BETA .000
 RV/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

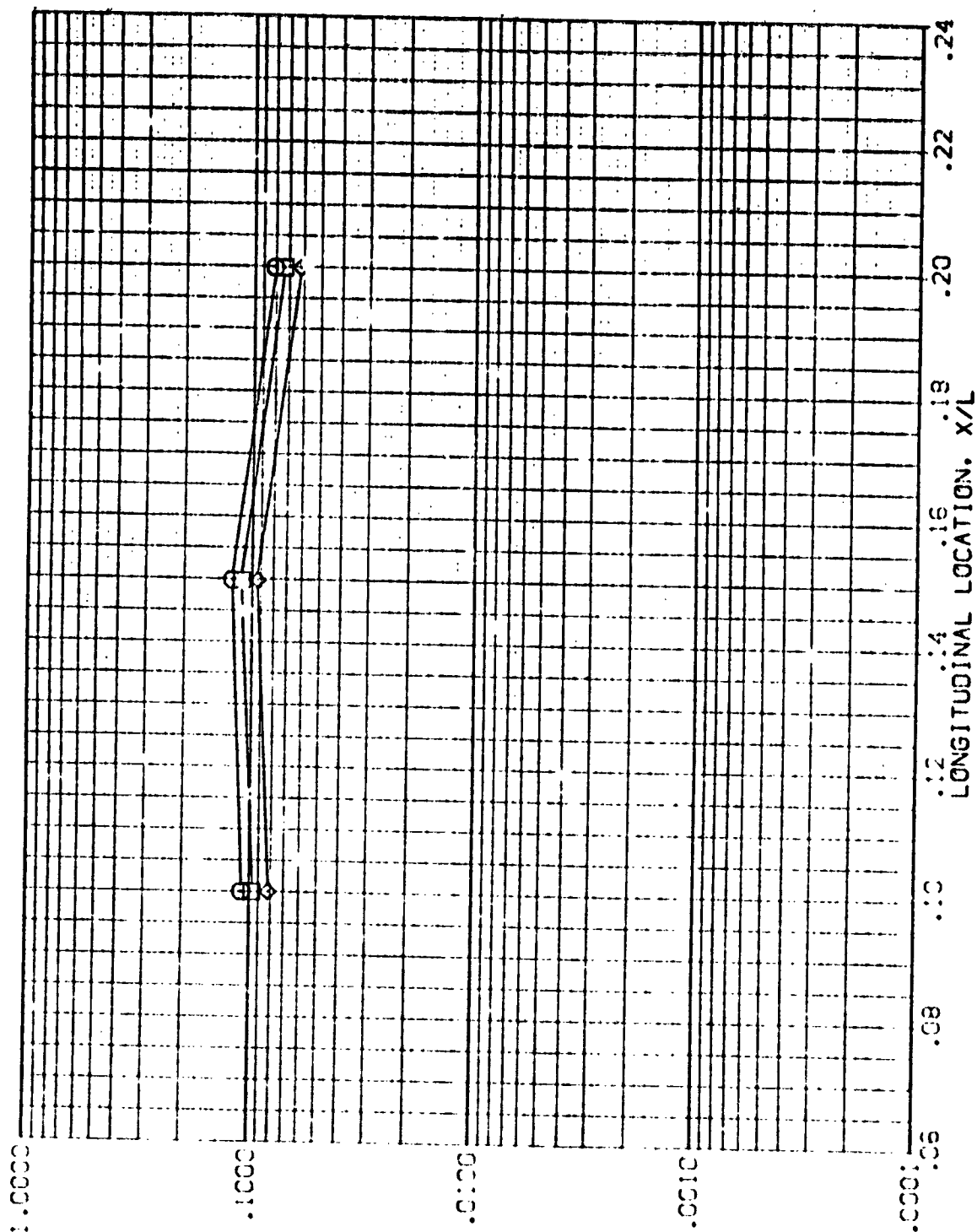


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

(REV009)

SYMBOL

HA/W/NT	CHINE	MACH
.850	1.000	5.220
920		
000.1		

PARAMETRIC VALUES	
~2.000	BETA
1.000	

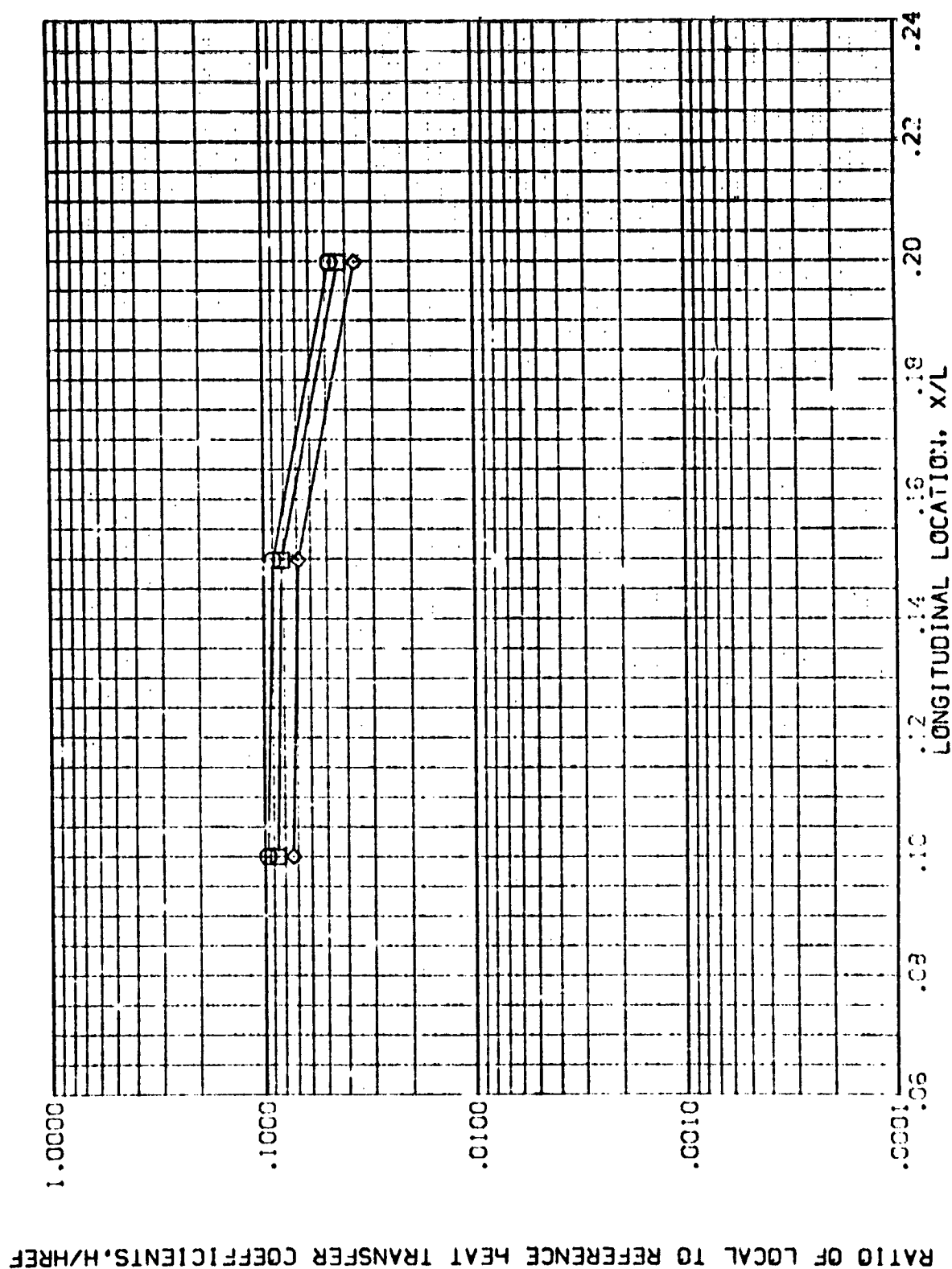


FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

(REV D10)

AMES 3.5-195 IH28 01+T: CHINE

SYMBOL
□
◇
◇

PAR/WT	CHINE	MACH
.850	1.000	5.293
.900		
1.000		

PARAMETRIC VALUES	
ALPHA	BETA
RN/L	
50.000	.000
4.000	

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

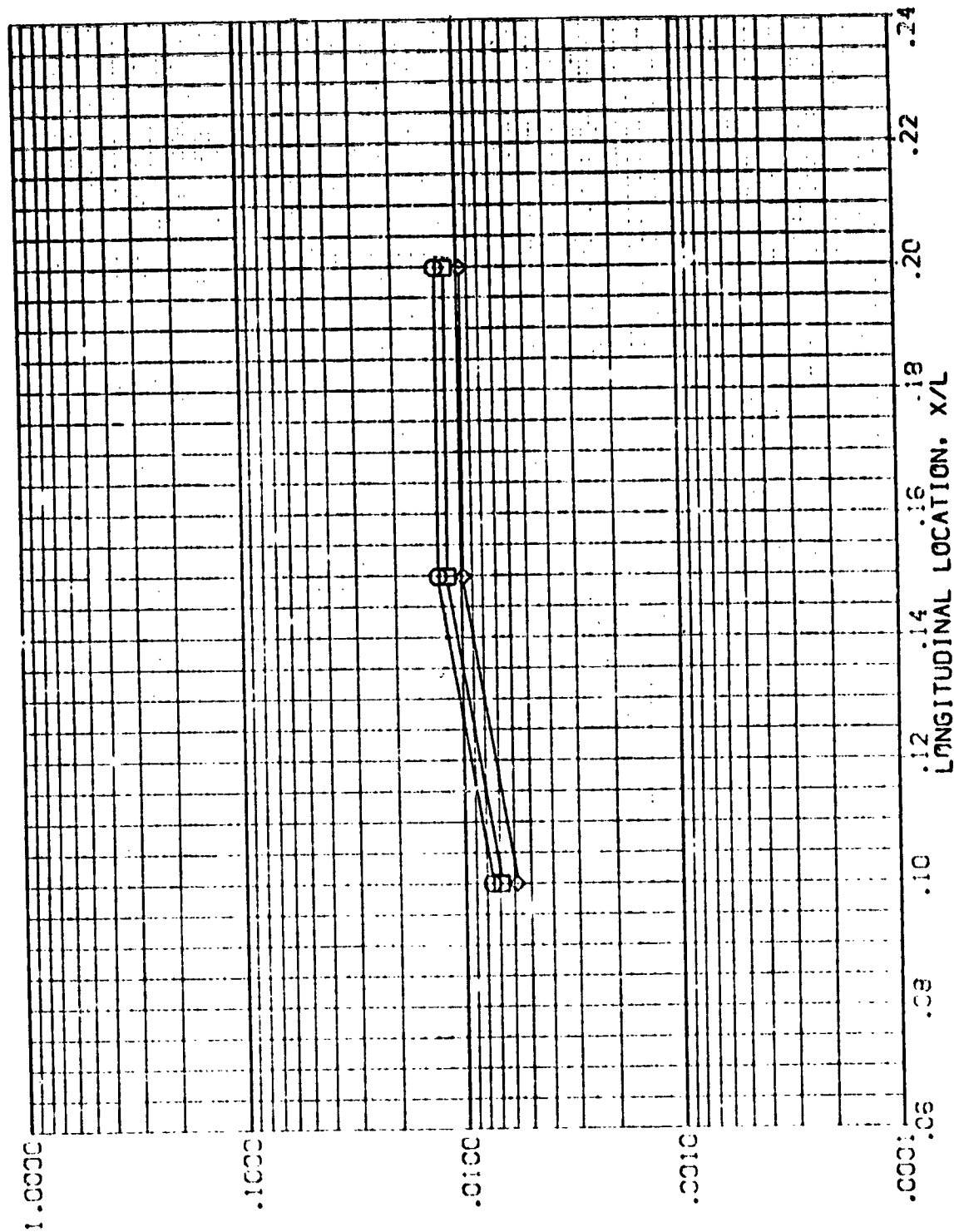


FIG. 17 CHINE. ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 01+T1 CHINE

SYMBOL H₀/H_{REF} CHINE H₀/H_{REF}

◇ .850 1.000 5.300
 .900
 1.000

(REV011)

PARAMETRIC VALUES
 ALPHA 30.000 BETA .000
 R₀/L 4.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

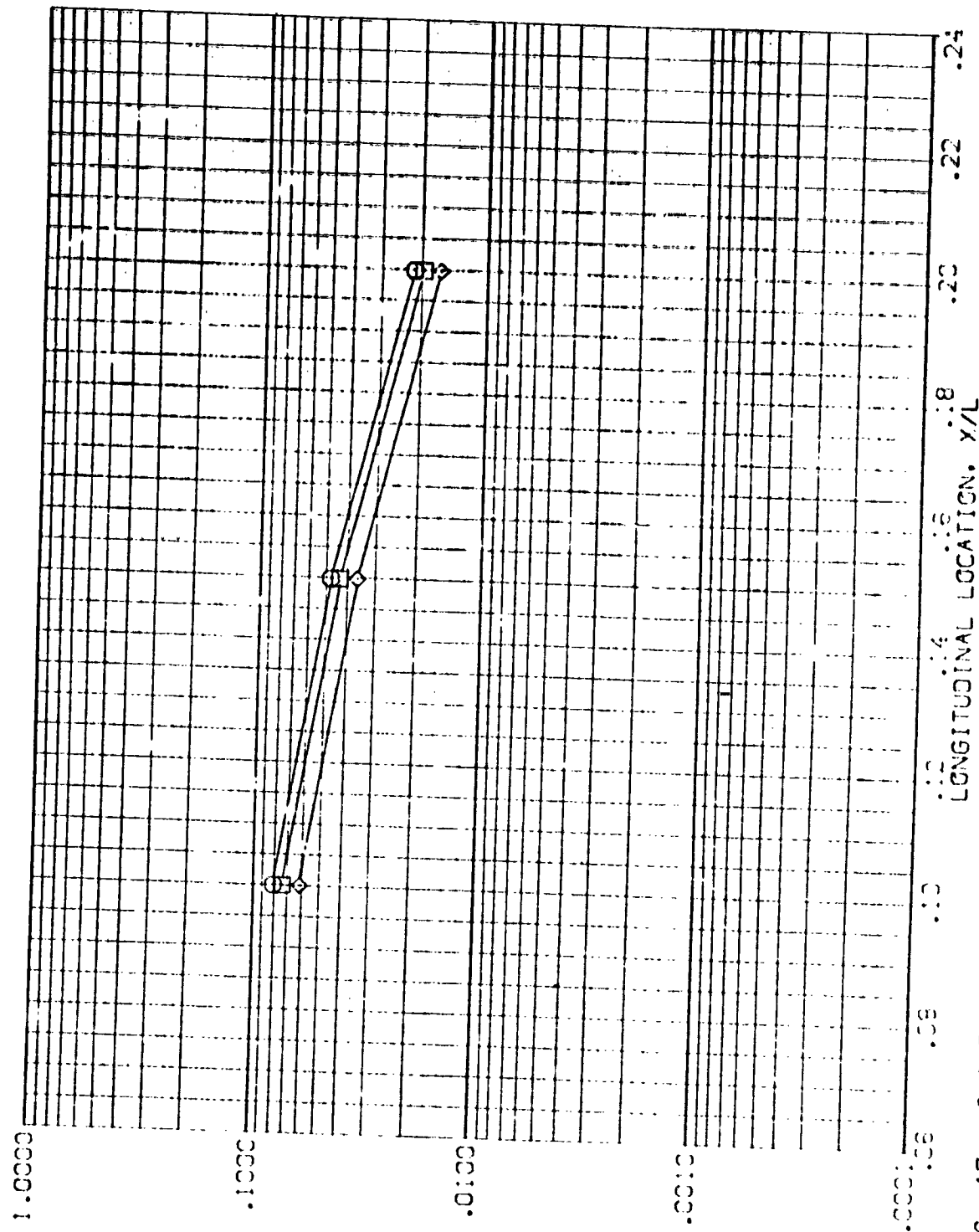


FIG. 17 CHINE. ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD01)

SYMBOL
O

CHINE
1.000

HAM/HT
.900

MACH
5.228

PARAMETRIC VALUES

ALPHA
RN/L

.000
1.000

BETA
.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, H_i/H_u

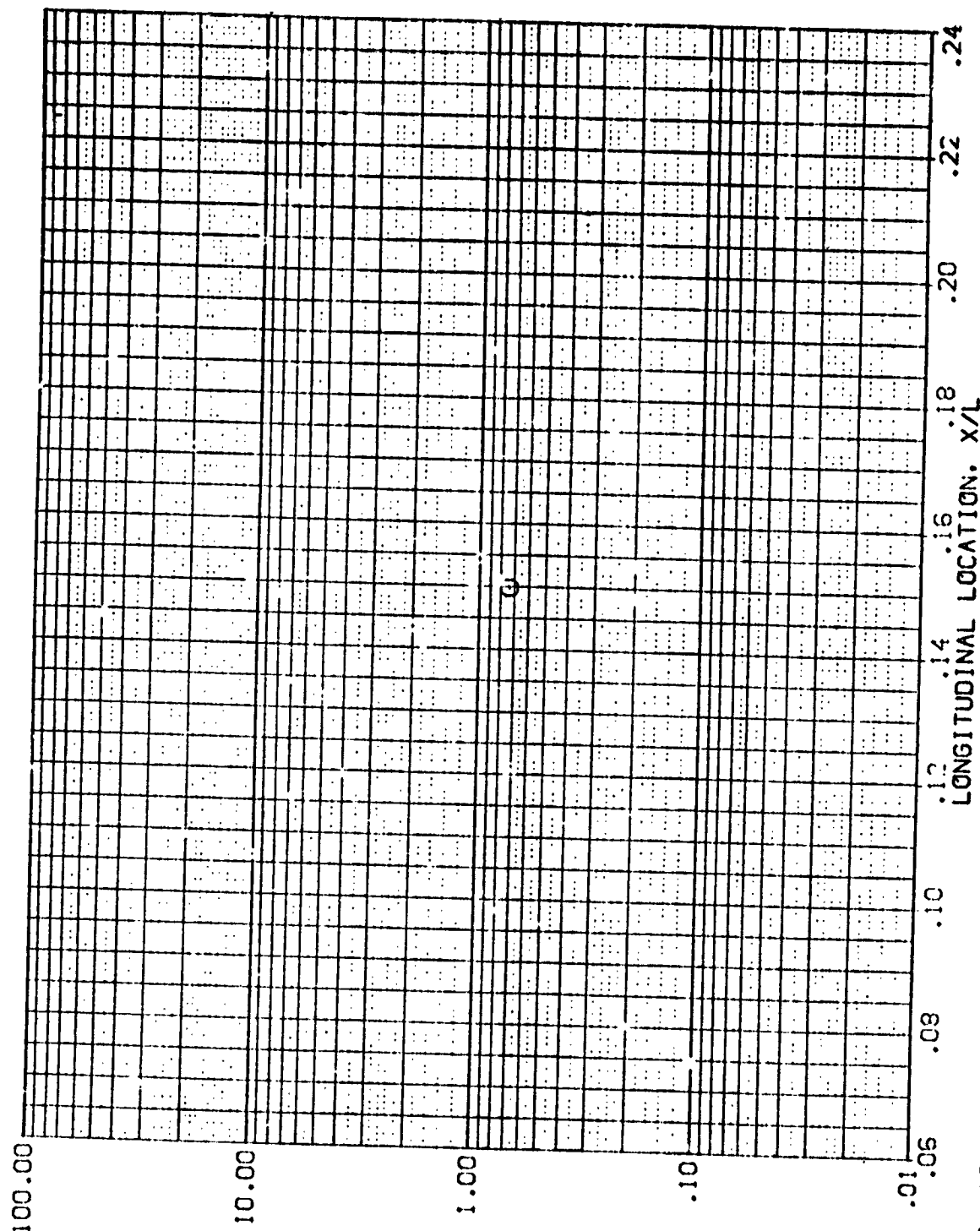


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD02)

SYMBOL CHINE HAW/HT MACH
O 1.000 .900 5.219

PARAMETRIC VALUES
ALPHA 30.000 BETA .000
RM/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

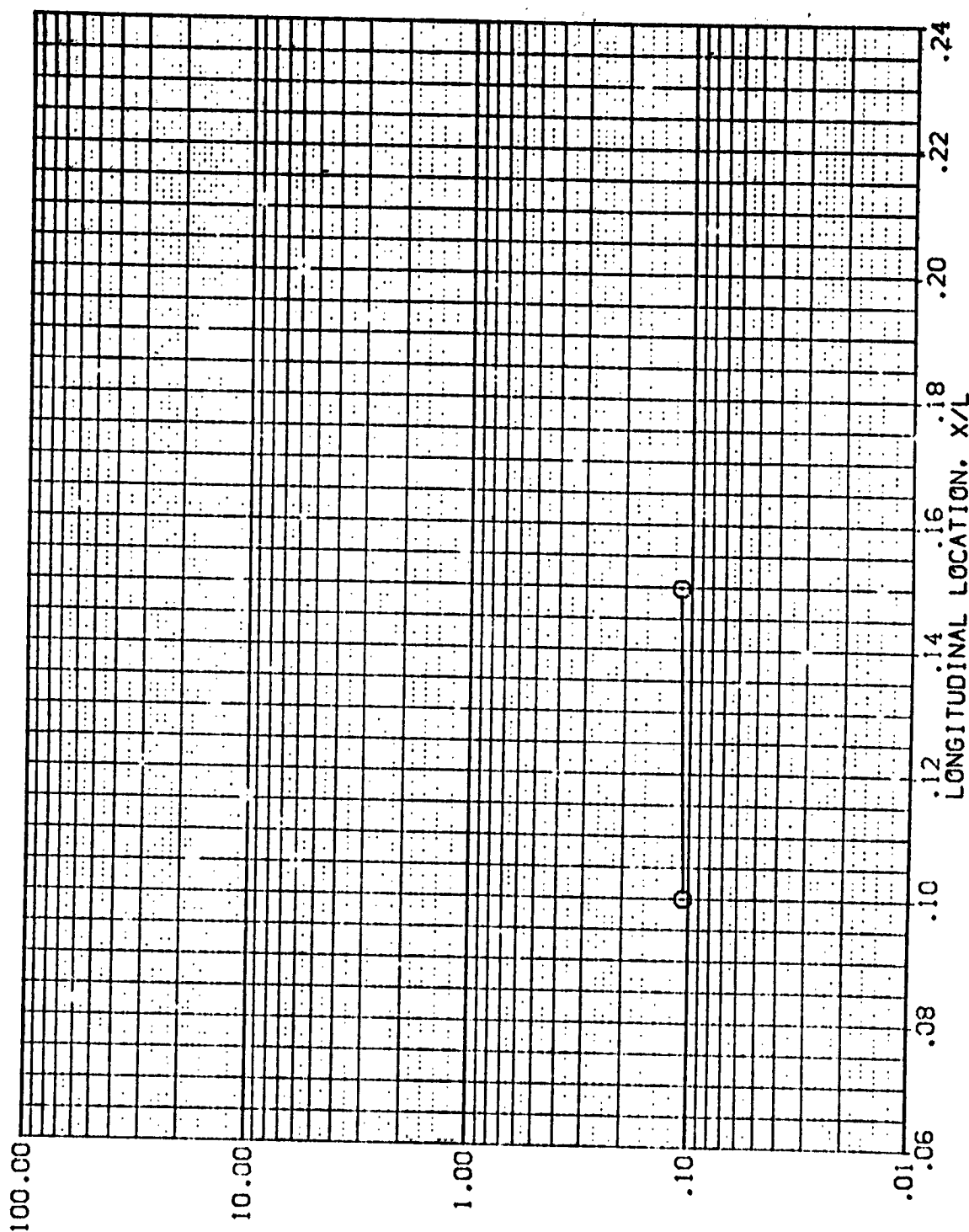


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-135 IH28 01+T1 CHINE

(BEVD003)

SYMBOL CHINE HAW/HT MACH
O 1.000 .900 5.220

PARAMETRIC VALUES
60.000 BETA .000
1.000

ALPHA
RN/L

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

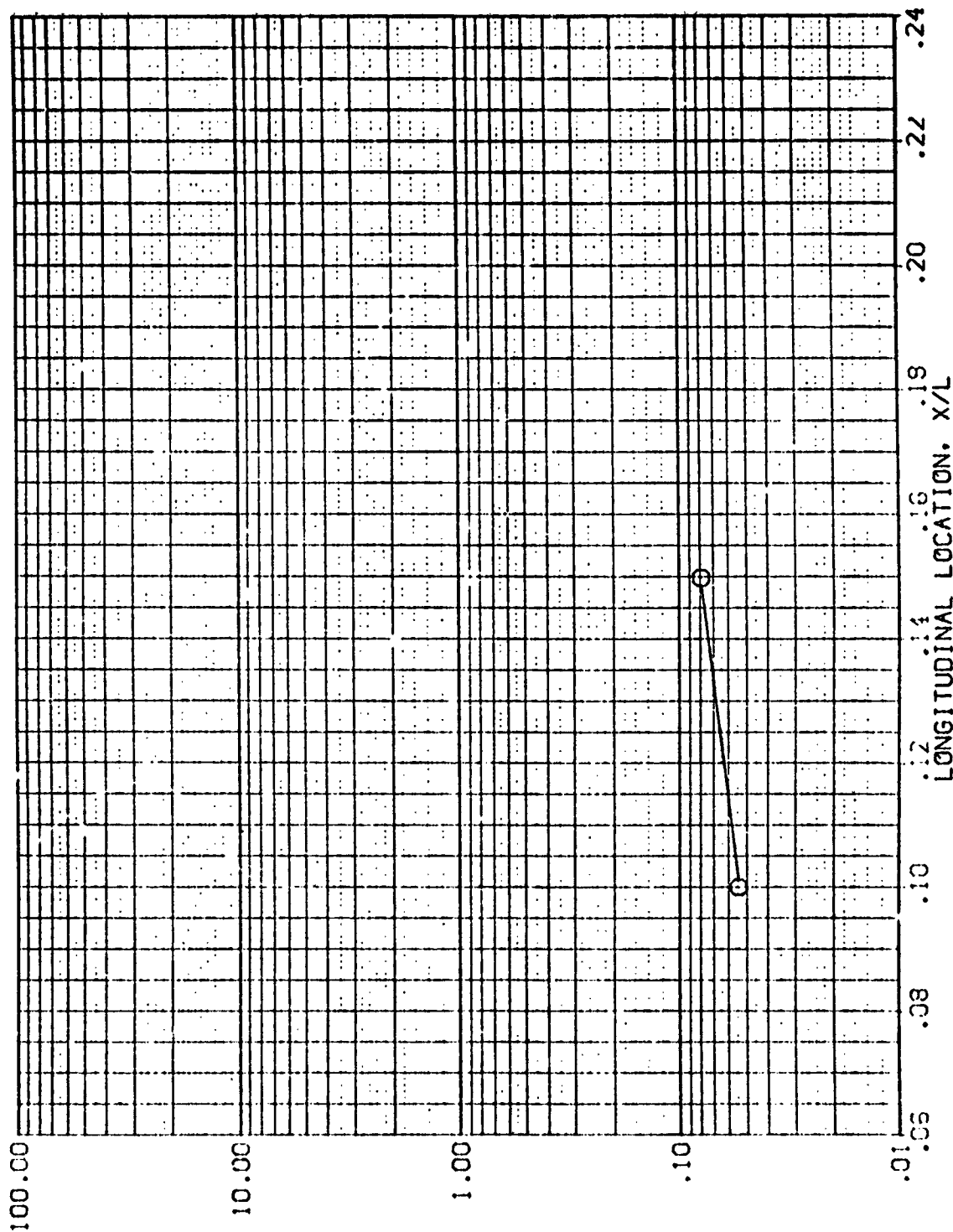


FIG. 18 CHINE. RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 C1+T1 CHINE

(BEVD04)

SYMBOL CHINE HAW/WT MACH
O 1.000 .900 5.219

PARAMETRIC VALUES
ALPHA 90.000 BETA .000
RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

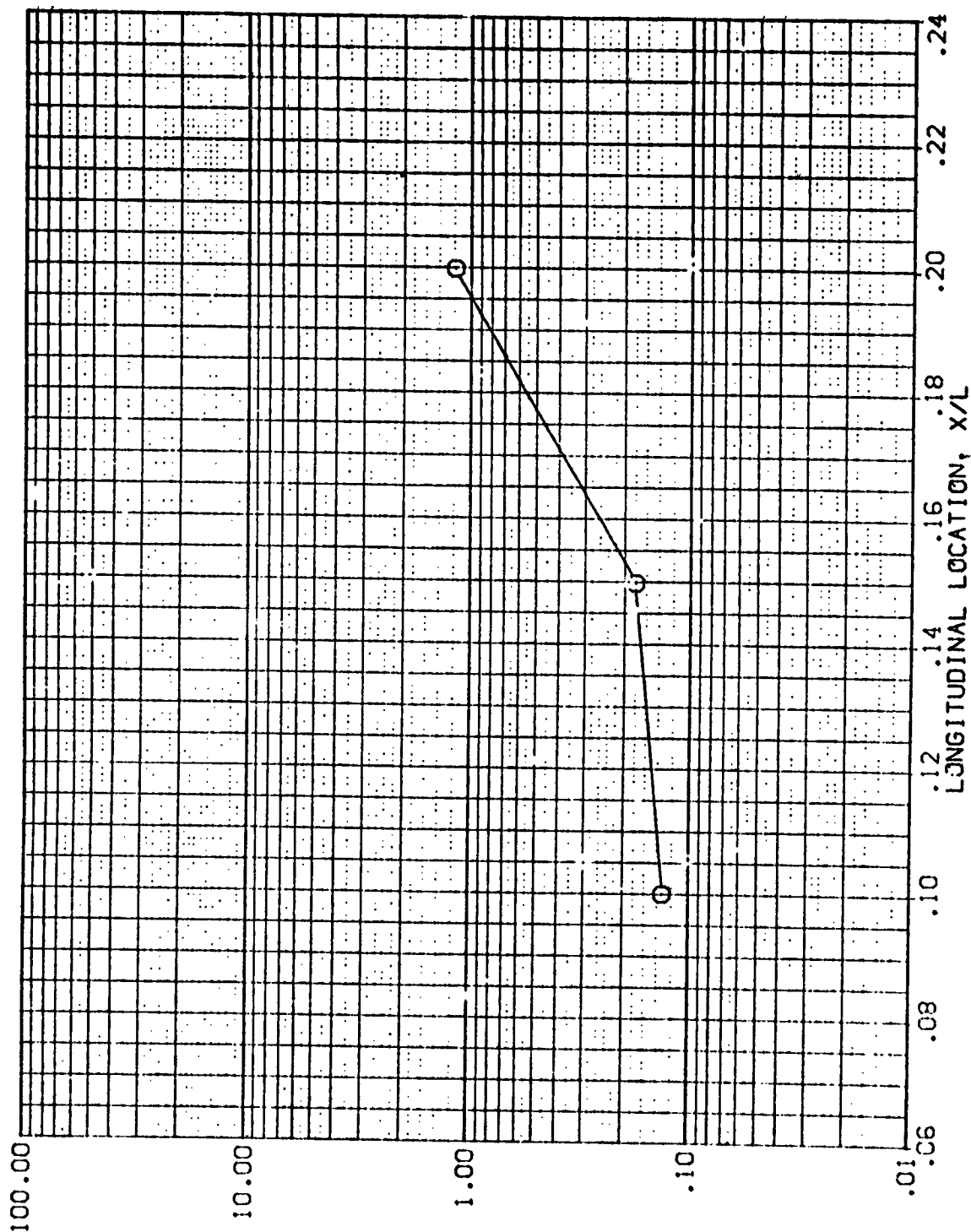


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD05)

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L 1.000

SYMBOL CHINE MACH
 O 1.000 5.220

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

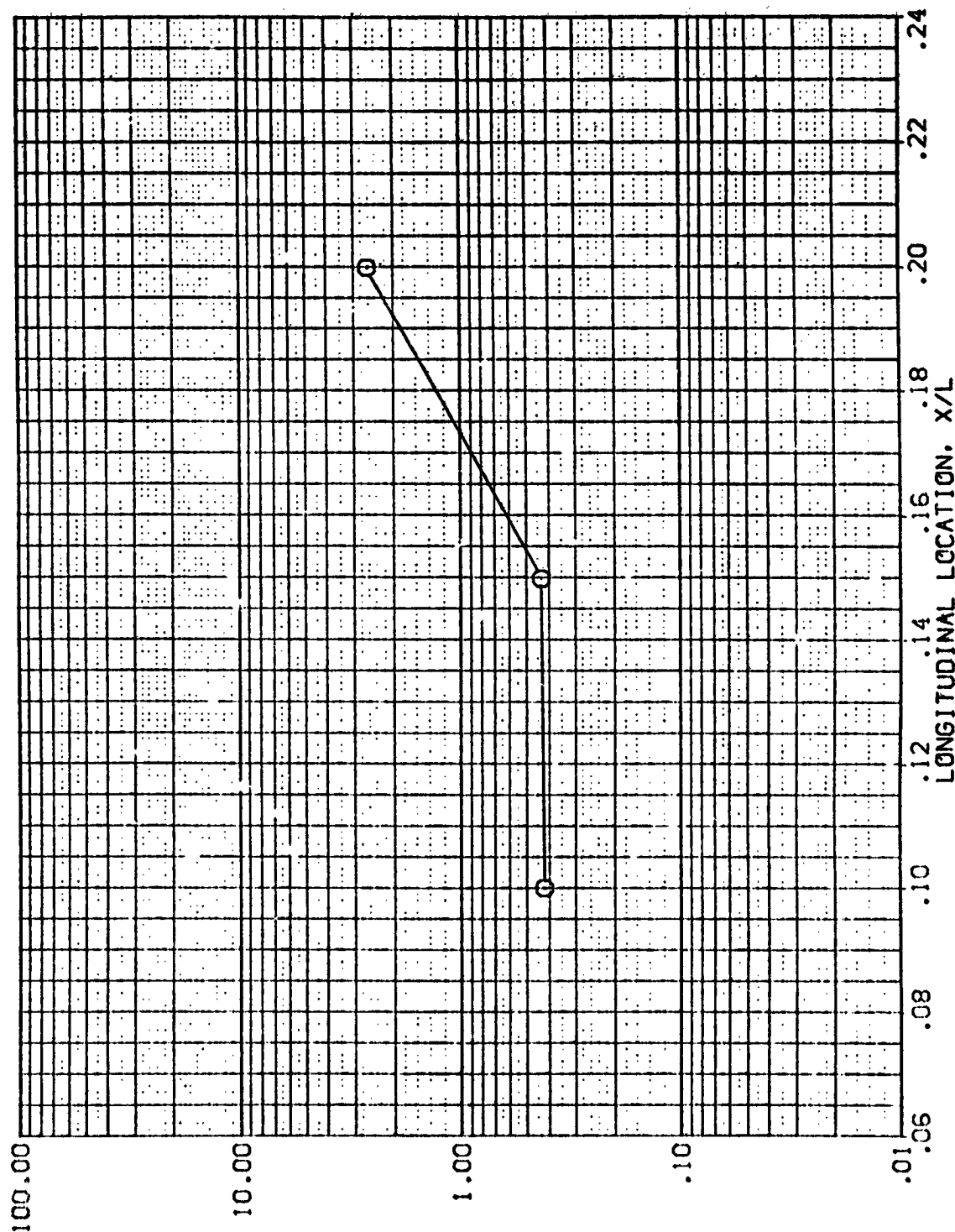


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD06)

SYMBOL CHINE HAW/HT MACH
O 1.000 .900 5.220

PARAMETRIC VALUES
ALPHA -1.000 BETA .000
RV/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

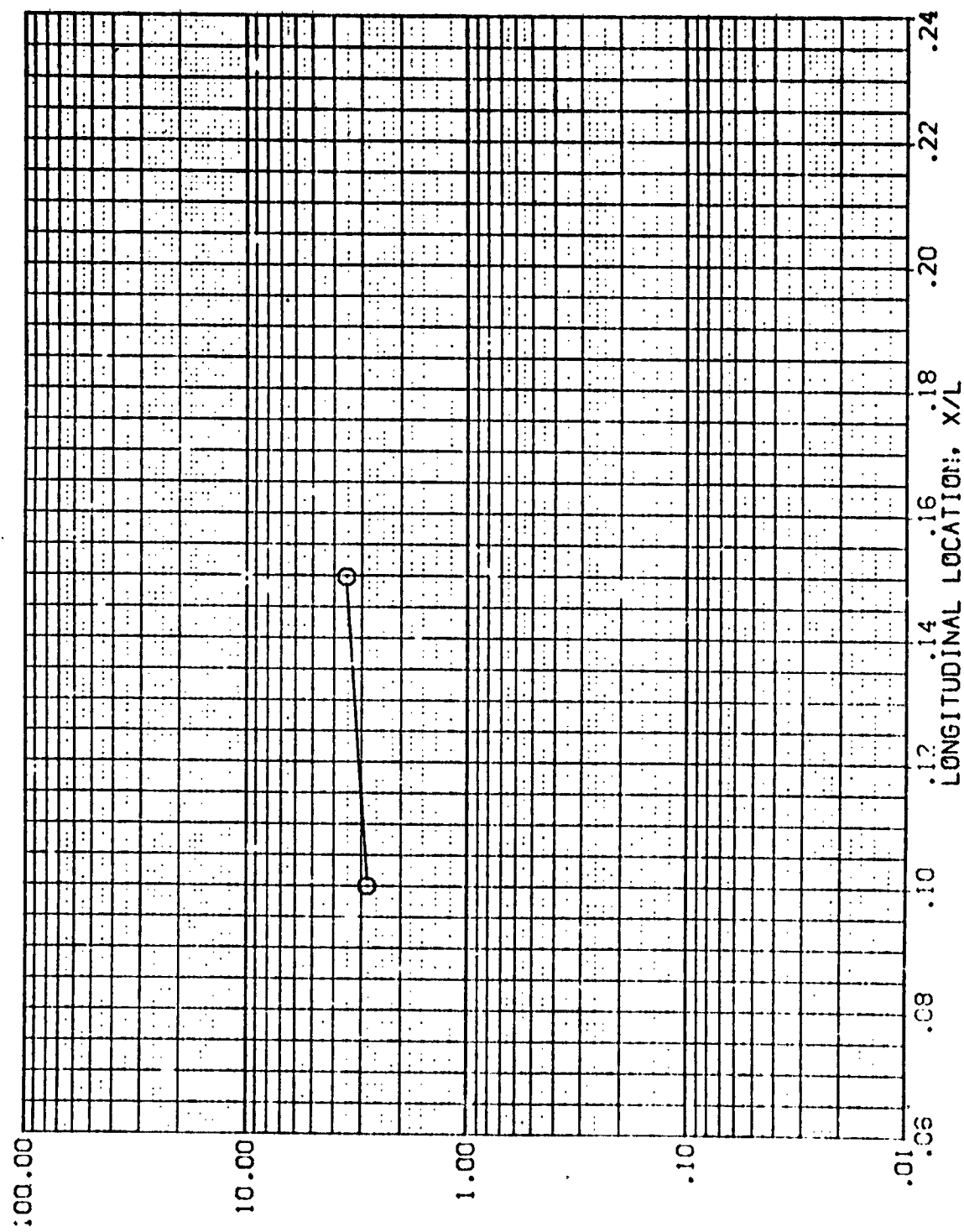


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 0:11 CHINE

(BEVD07)

SYMBOL CHINE HAW/HT MACH
O 1.000 .900 5.219

PARAMETRIC VALUES
ALPHA -90.000 BETA .000
RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

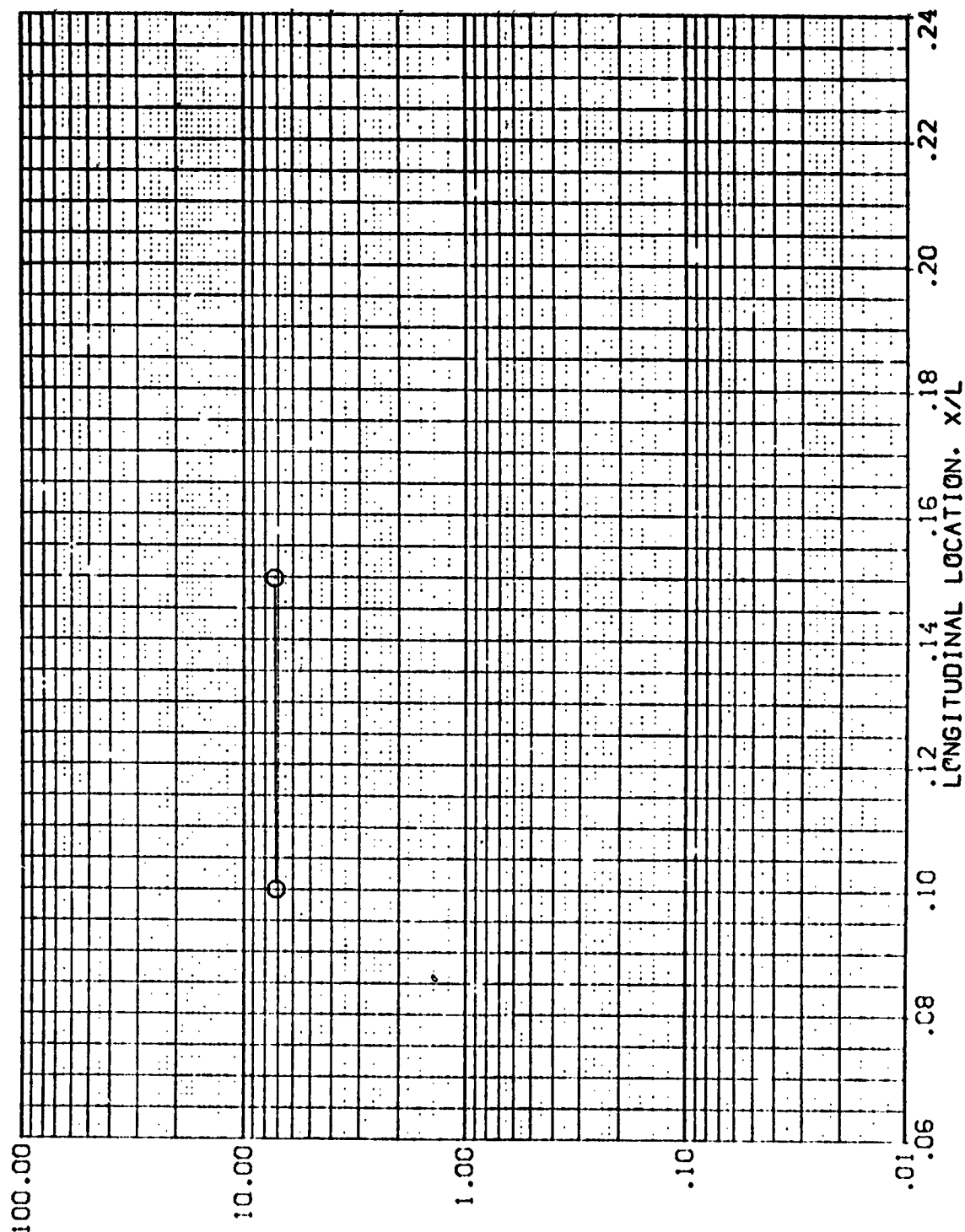


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD08)

SYMBOL CHINE HAW/HT MACH
 O 1.530 .900 5.220

PARAMETRIC VALUES
 ALPHA -60.000 BETA .000
 RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

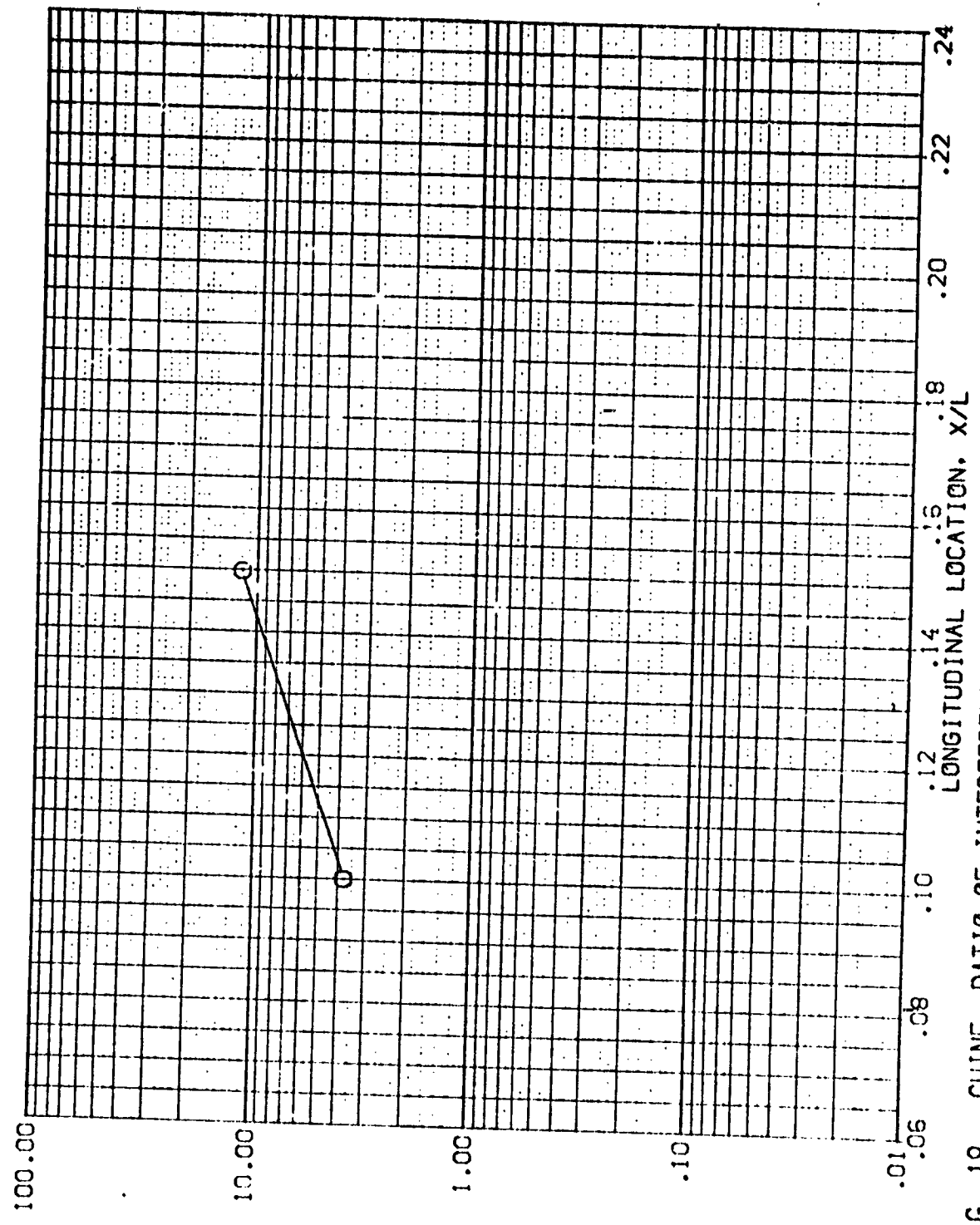


FIG. 18 CHINE. RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 C1+T1 CHINE

(BEVD09)

SYMBOL
O

CHINE 1.000
HAW/HT .900
MACH 5.220

PARAMETRIC VALUES
ALPHA -30.000
RN/L 1.000
BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

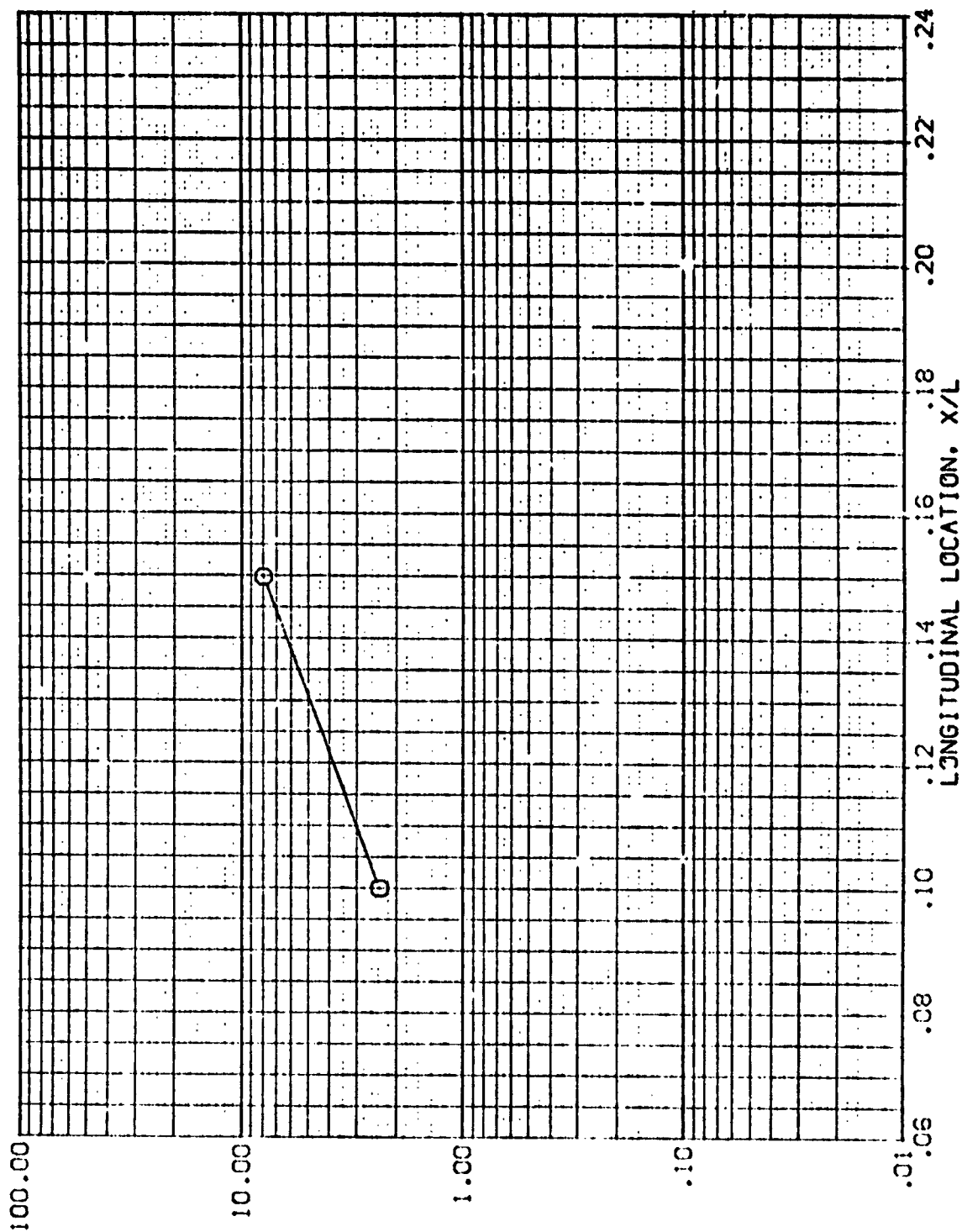


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

[illegible]

ALPHA	BETA	RN/L
.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
90.000	.000	1.000
120.000	.000	1.000

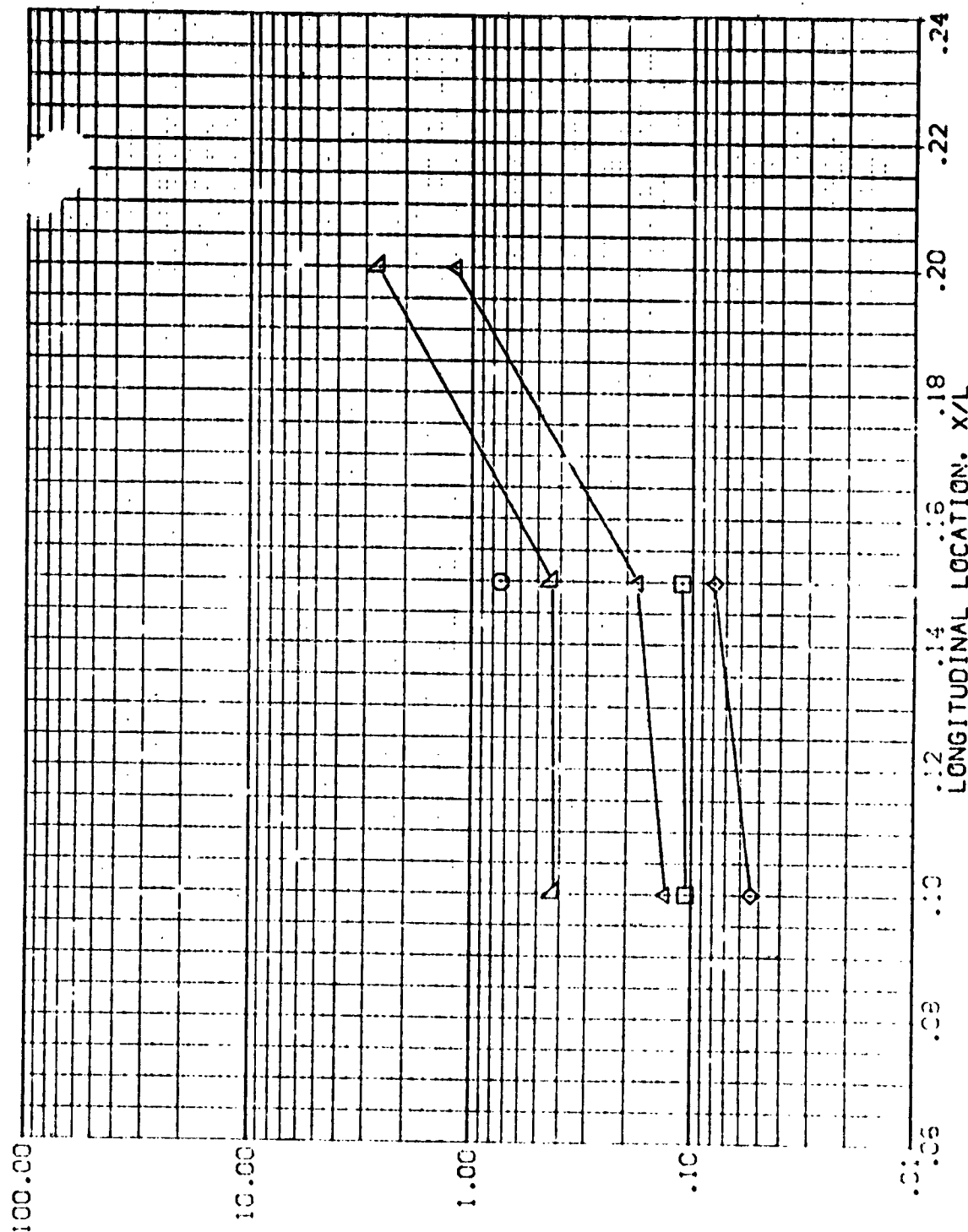


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

(C)
(C)
(C)
..
"
11
11
1
(C)

(C)
(C)
.

"
1
2
4
1

(C)
(C)
(C)
."

"

(C)
2
(C)
2

DATA SET SYST-
 (BEV001)
 (BEV002)
 (BEV003)
 (BEV004)
 (BEV005)
 (BEV006)

CONFIGURATION DESCRIPTION
 AES 3.5-95 128 01+11 CHINE
 AES 3.5-95 128 01+11 CHINE
 AES 3.5-95 128 01+11 CHINE
 AES 3.5-95 128 01+11 CHINE
 AES 3.5-95 128 01+11 CHINE

ALPHA	BETA	RV/L
.000	.000	1.000
-30.000	.000	1.000
-60.000	.000	1.000
-90.000	.000	1.000
-120.000	.000	1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

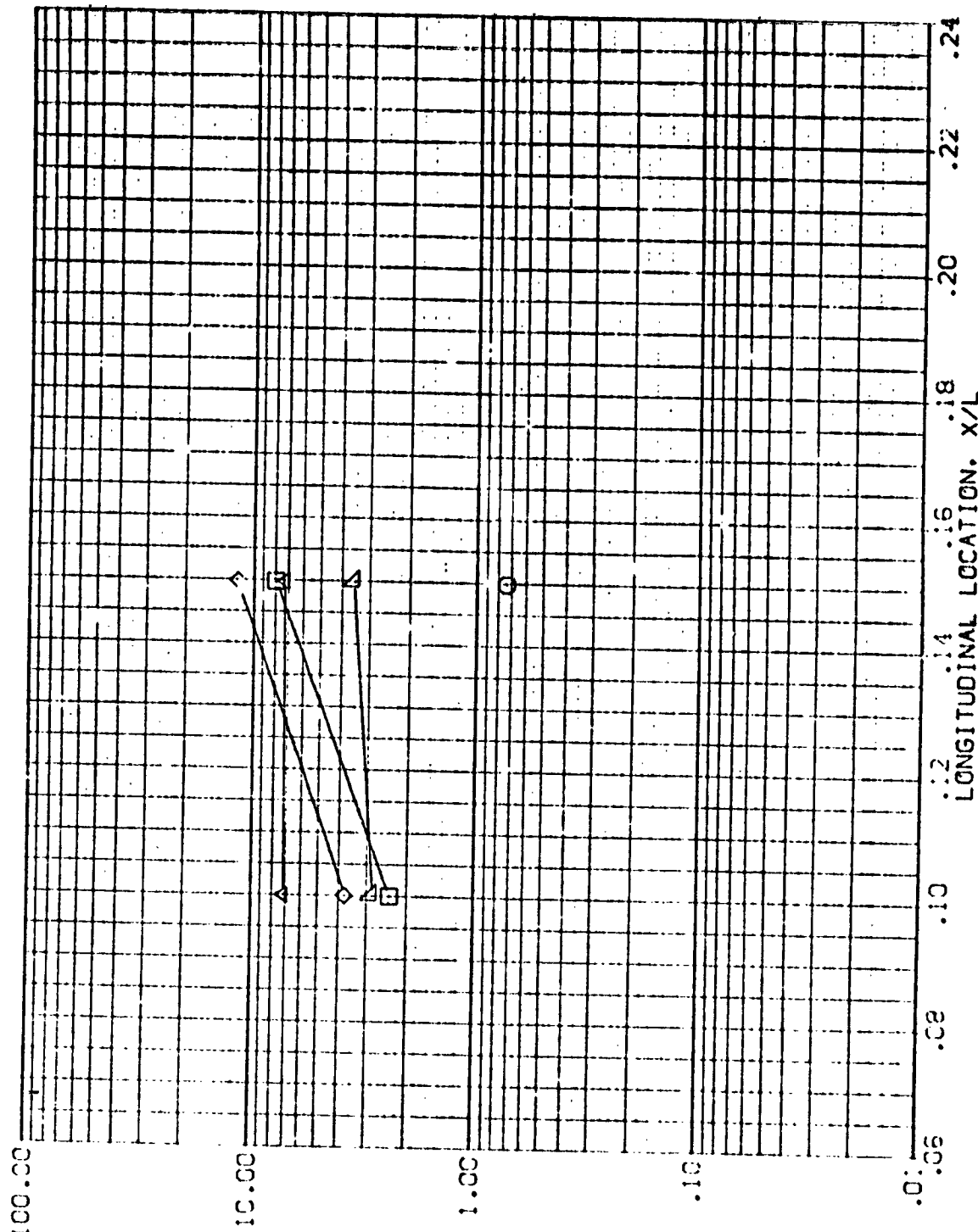


FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

$\alpha_{TACH} = 5.300$ $\alpha_{TACH}/T = .900$ $CHINE = 1.000$

AMES 3.5-195 IH28 C1 WING LOWER SURFACE (REV F19)

SYMBOL	HAW/HT	ZY/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
○	.850	.400	5.220	.000	.000
□	.900			1.000	
◇	1.000				

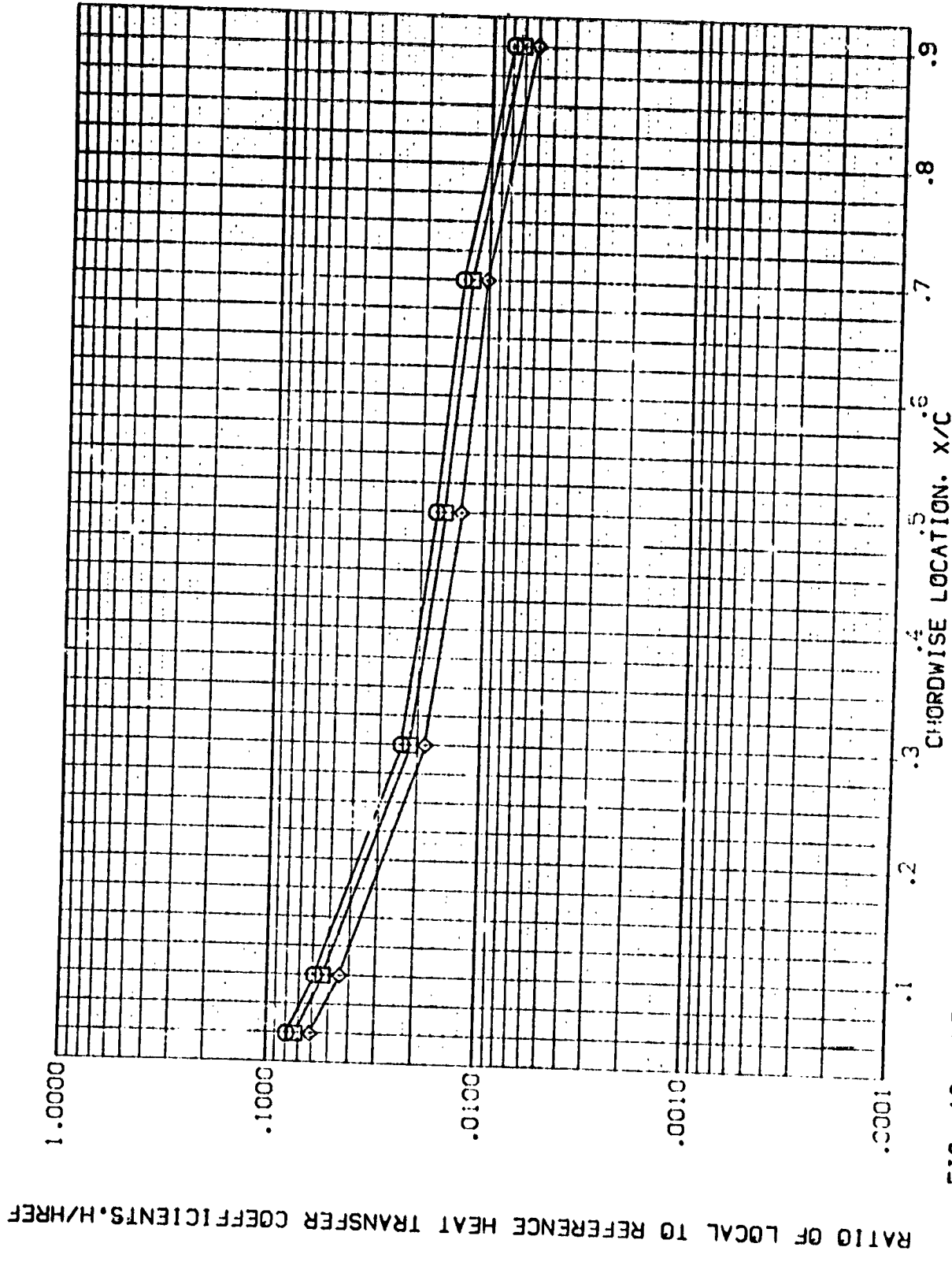


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 1H28 01 WING LOWER SURFACE (REV F19)

SYMBOL	MAW/MT	2V/B	MACH	PARAMETRIC VALUES
□	.850	.600	5.220	ALPHA
◇	.900			RV/L
	1.000			BETA
				.000
				1.000
				.000

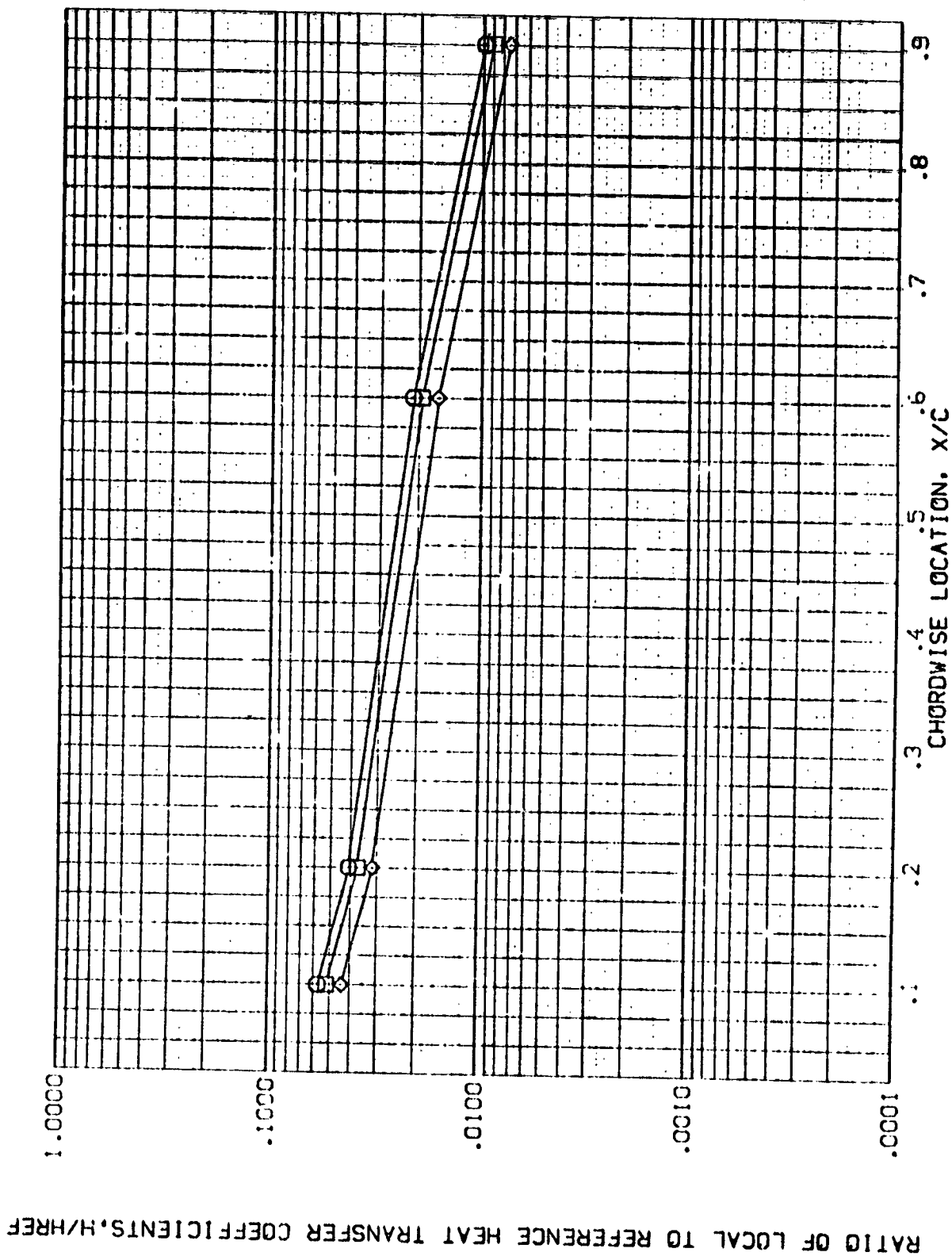


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV F19)

PARAMETRIC VALUES
 ALPHA
 PIV/L
 BETA
 .000
 1.000
 .000

SYMBOL
 H/W/HT
 2Y/B
 MACH
 .850
 .800
 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

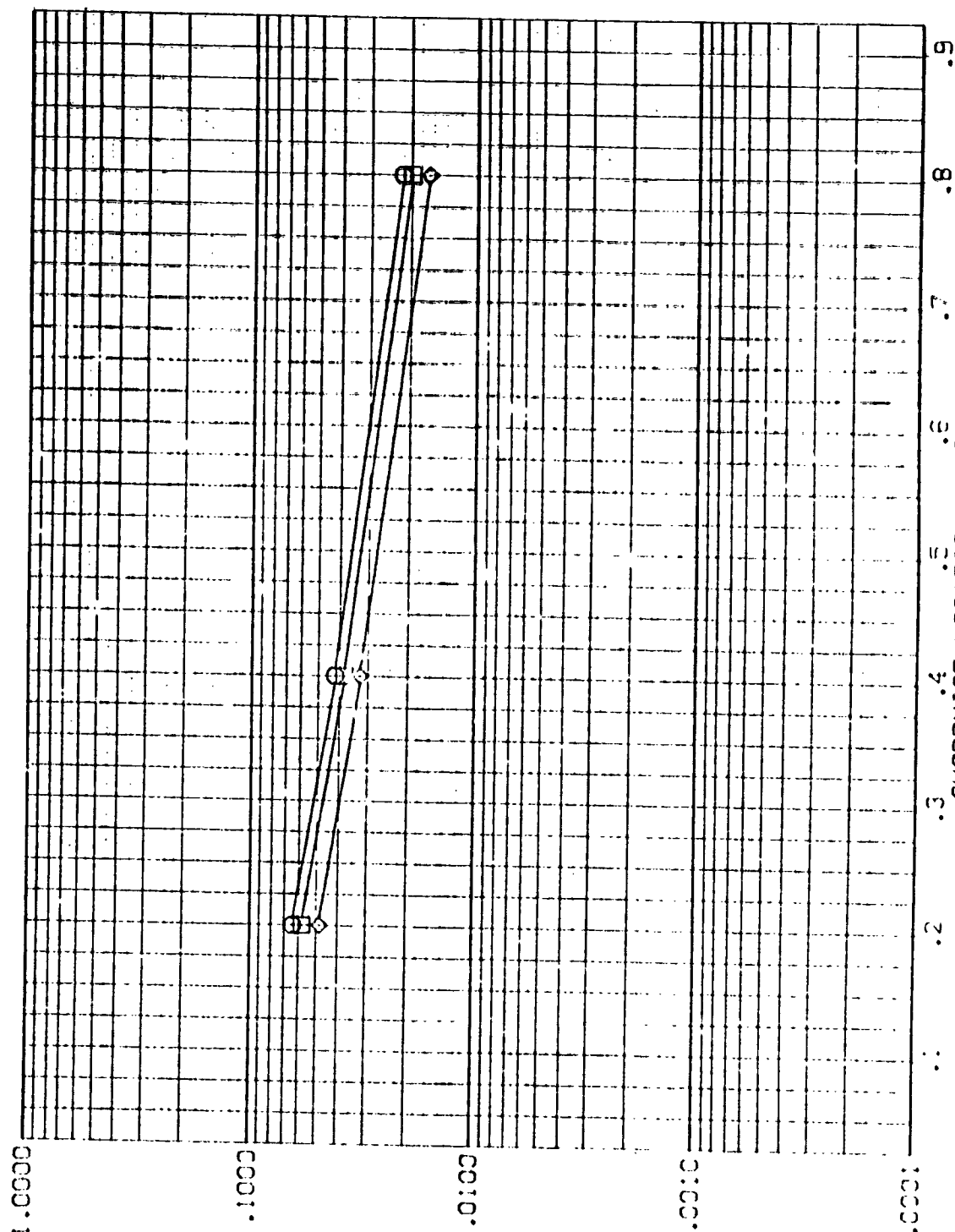


FIG. 13 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 0'

WING LOWER SURFACE

(REVF20)

SYMBOL

HAW/HT

2Y/B

MACH

.85C

.400

5.219

.900

1.000

1.000

PARAMETRIC VALUES

30.000 BETA

.000

ALPHA

1.000

RN/L

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

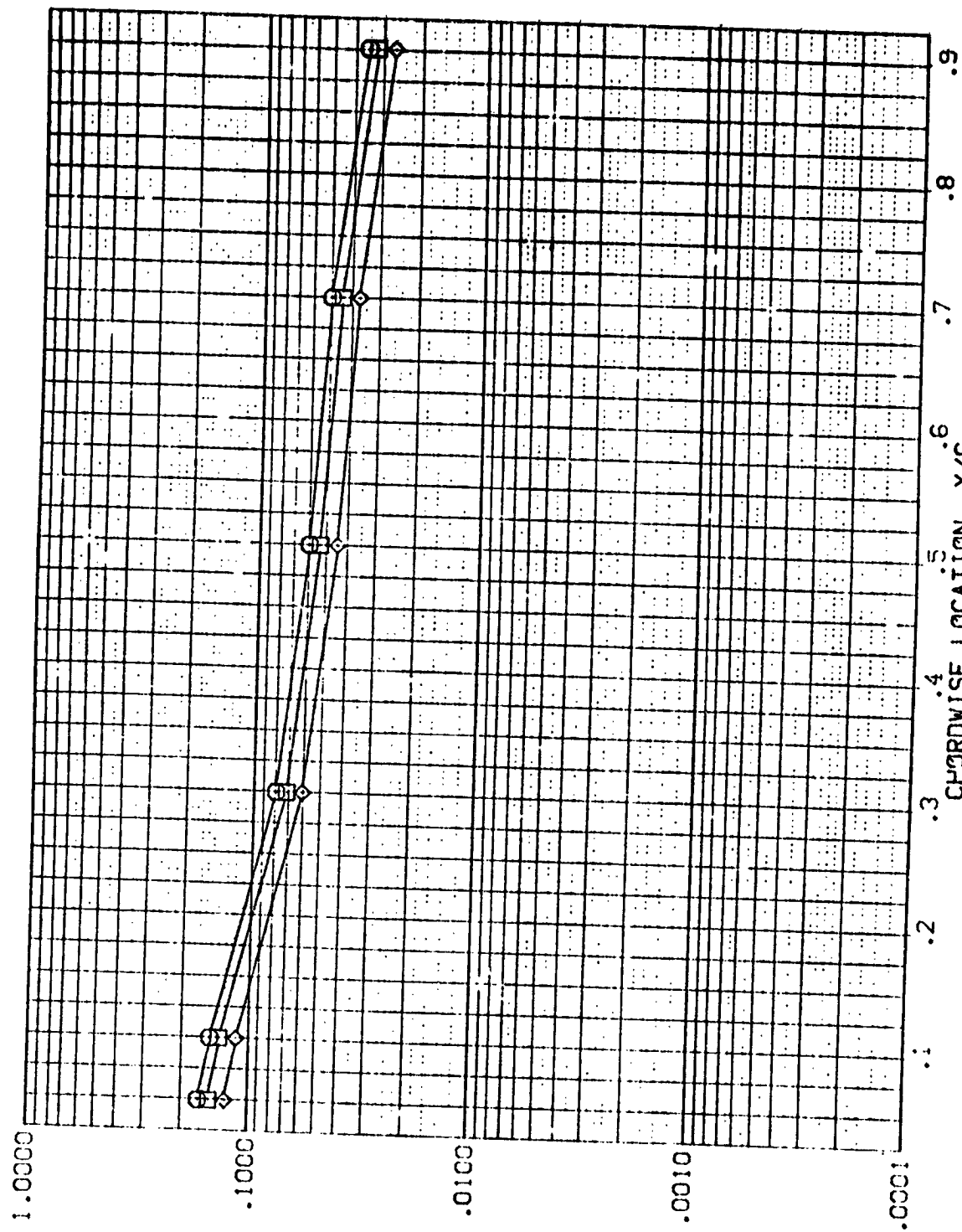


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV20)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	SETA RN/L
○	.850	.600	5.219	30.000	.000
◇	.900			1.000	
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

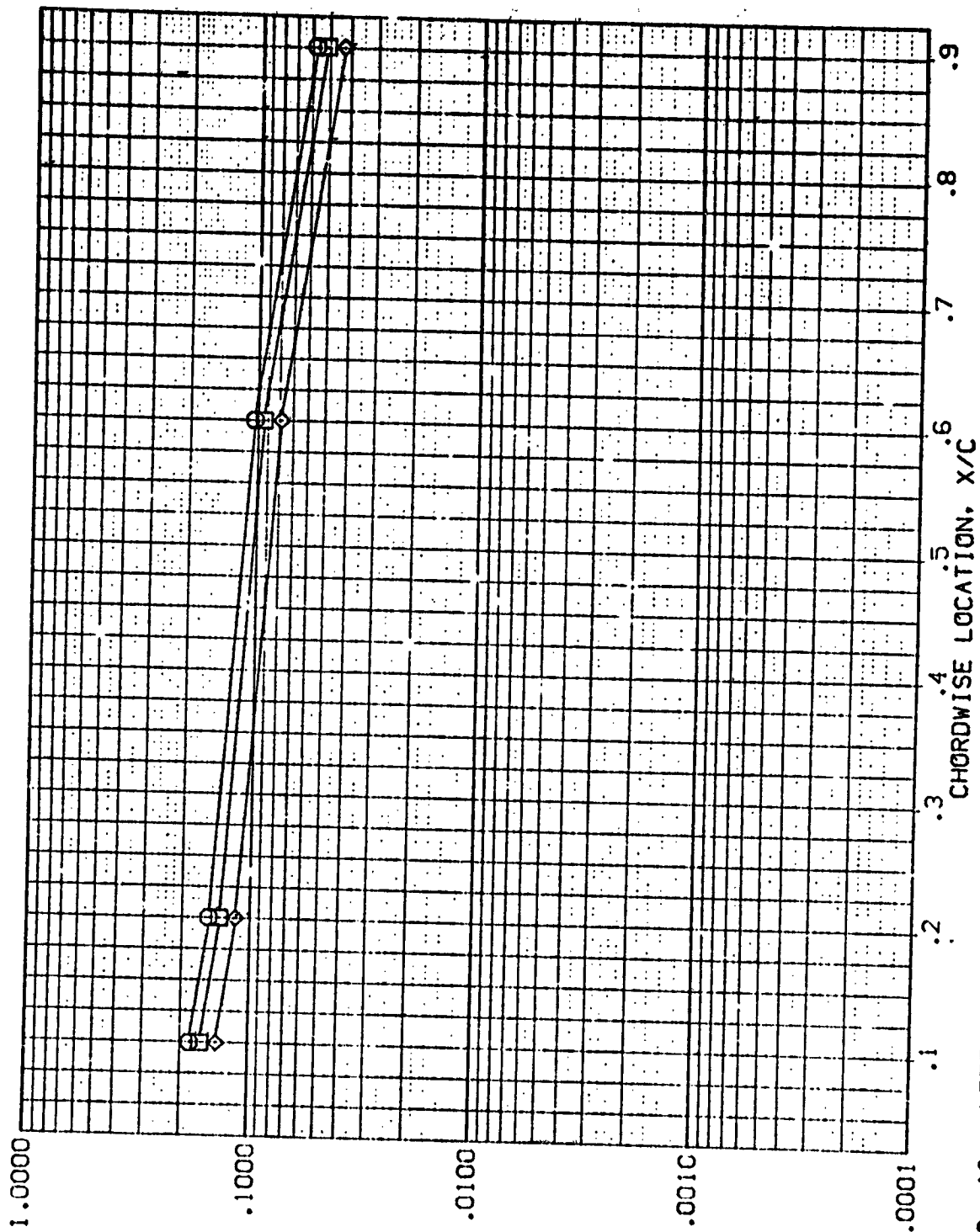


FIG. 19 LEFT WING LOWER SURFACE ORBITER ALONE

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
				RV/L	
□	.850	.800	5.219	30.000	.000
◇	.900			1.000	
	1.000				

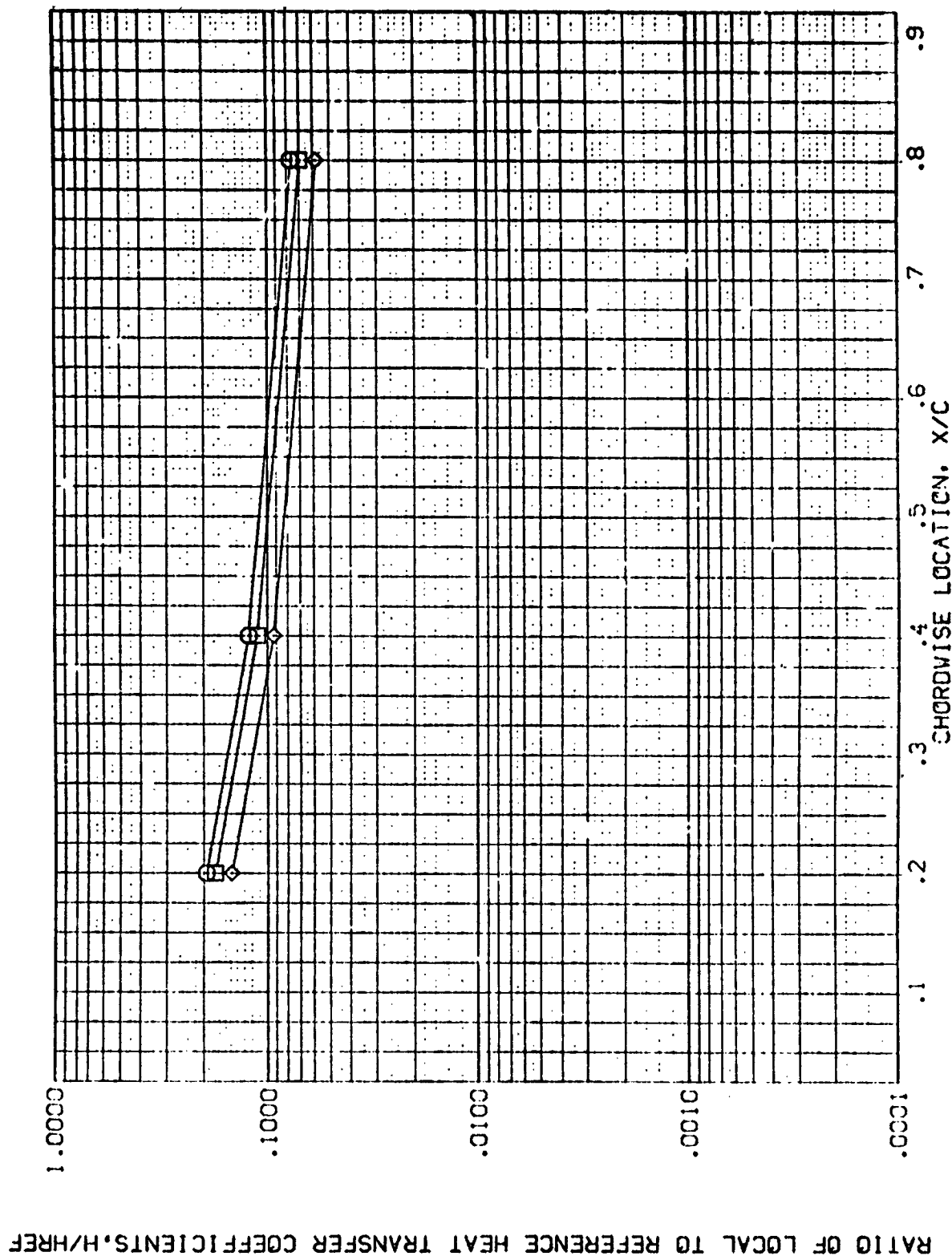


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV F21)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.220	ALPHA 60.000 BETA .000
□	.900			RN/L 1.000
	1.000			

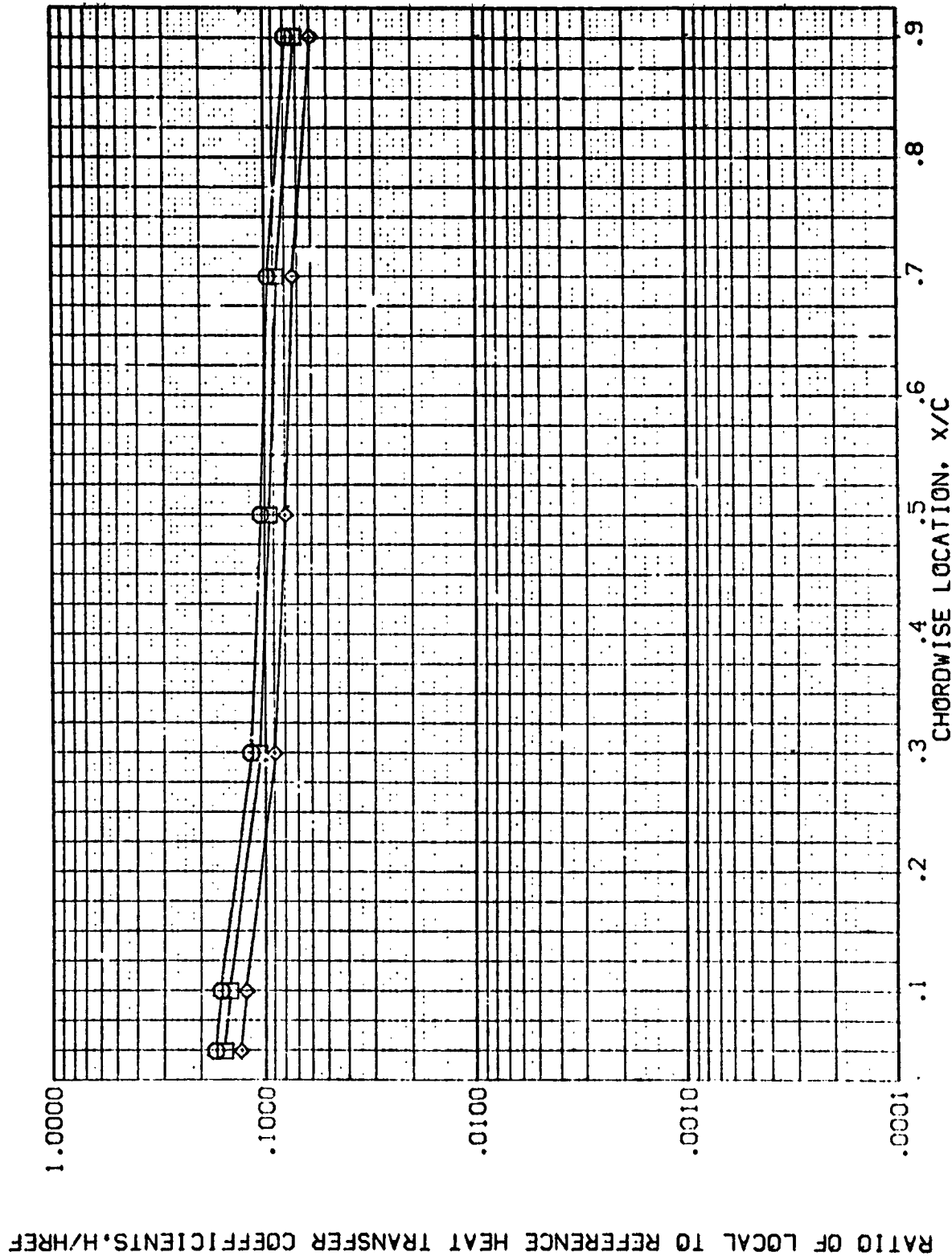


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV F21)

SYMBOL	HAU/HT	2Y/B	MACH	PARAMETRIC VALUES
□	.85C	.600	5.220	ALPHA
◇	.900			KN/L
	1.000			50.000
				BETA
				1.000
				.000

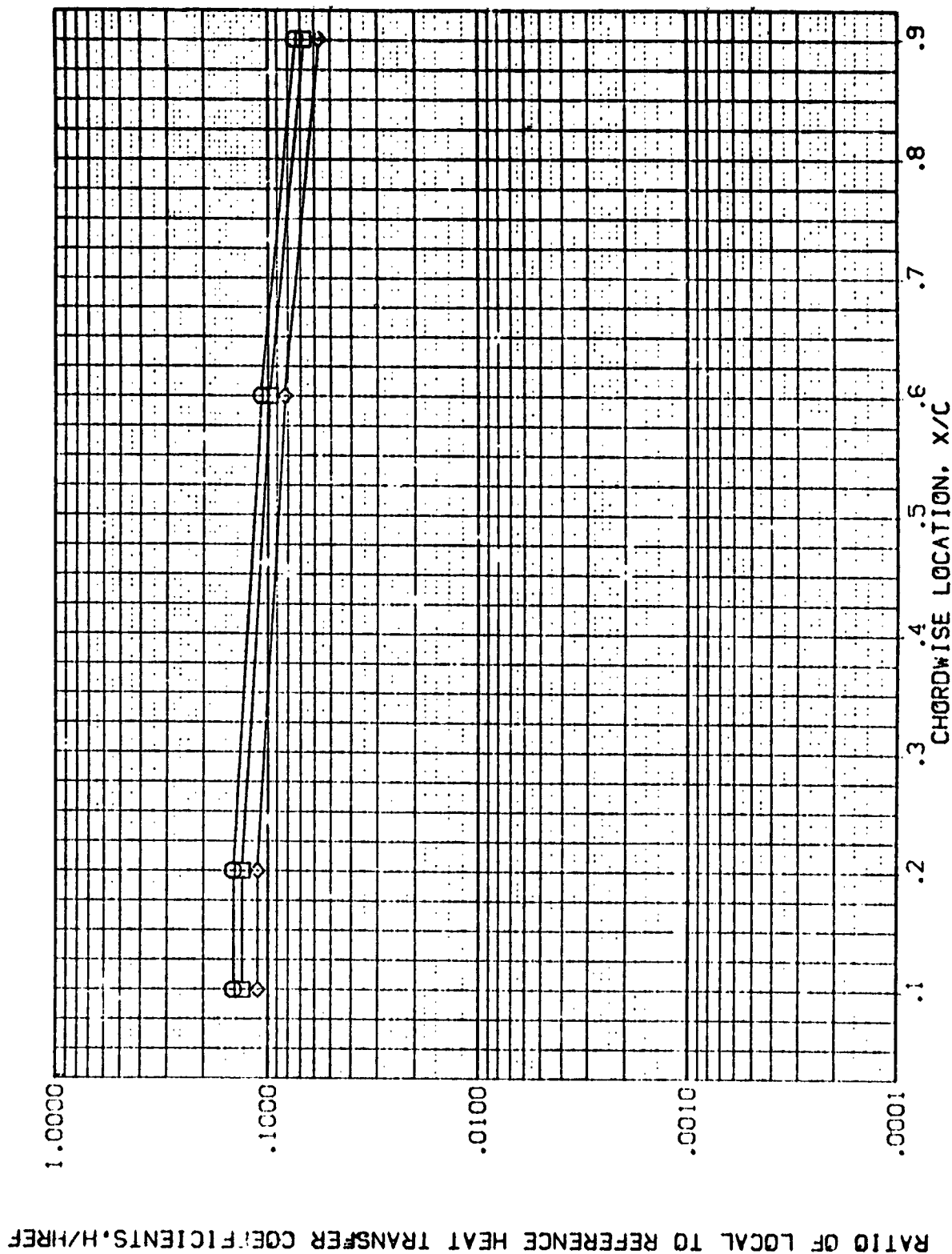


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV F21)

PARAMETRIC VALUES
 ALPHA 60.000 BETA .000
 RN/L 1.000

SYMBOL MACH
 0.850
 0.900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

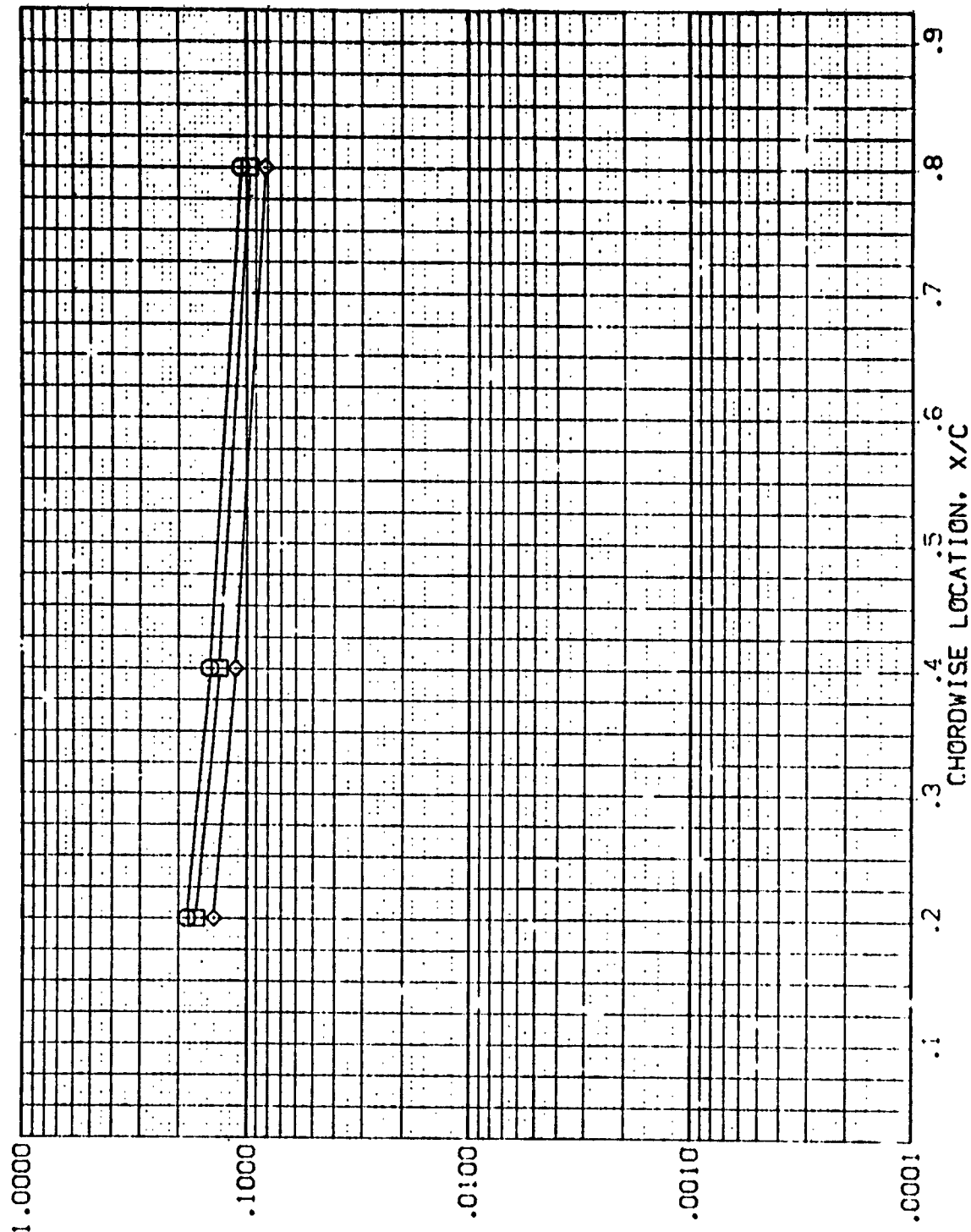


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV22)

SYMBOL
 □
 ◇

HAW/HT 2Y/B MACH
 .850 .400 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 90.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

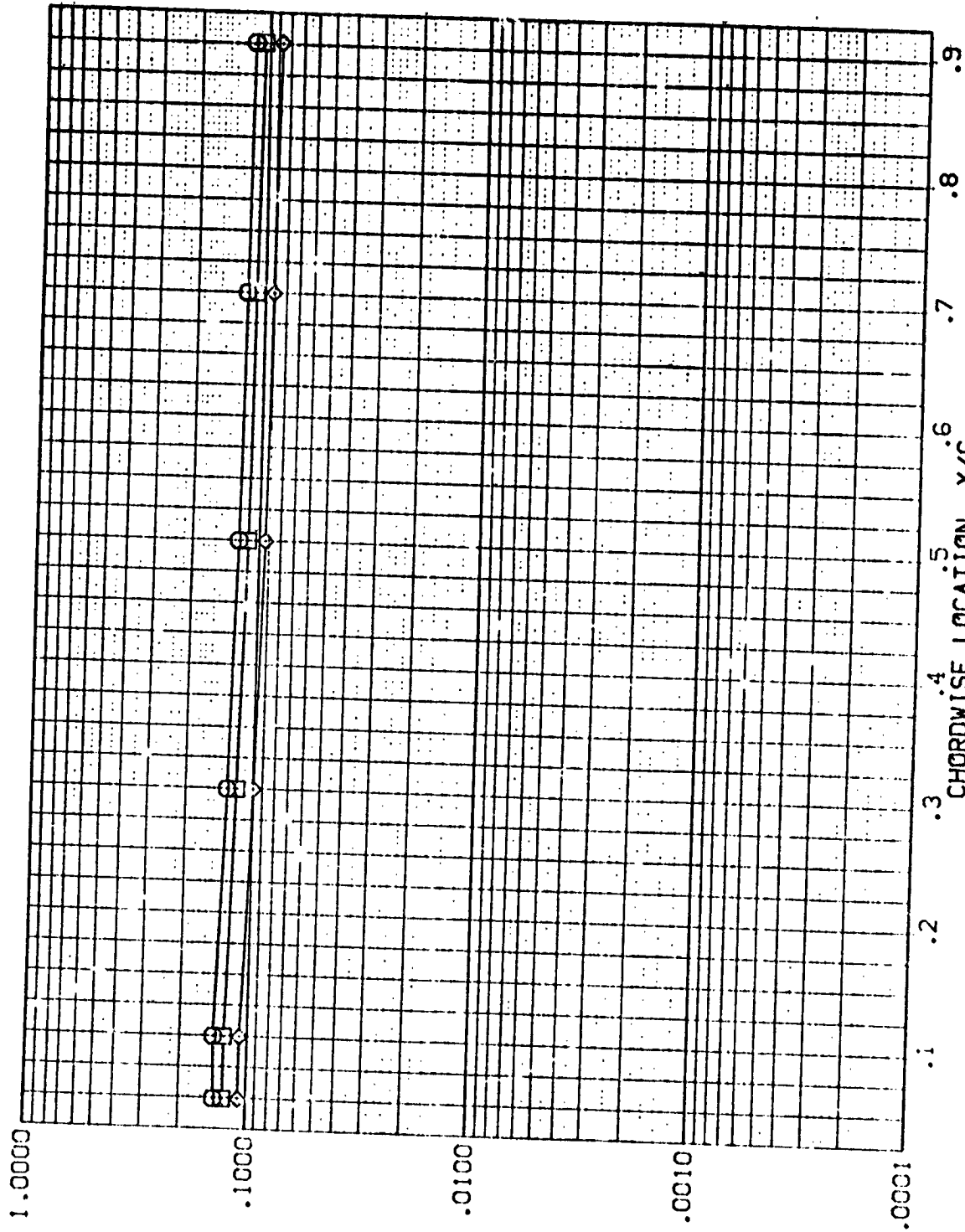


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV F22)

SYMBOL
 □
 ◇

HAW/HT .850
 2Y/B .600
 MACH 5.220

PARAMETRIC VALUES
 ALPHA 30.000
 RN/2 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

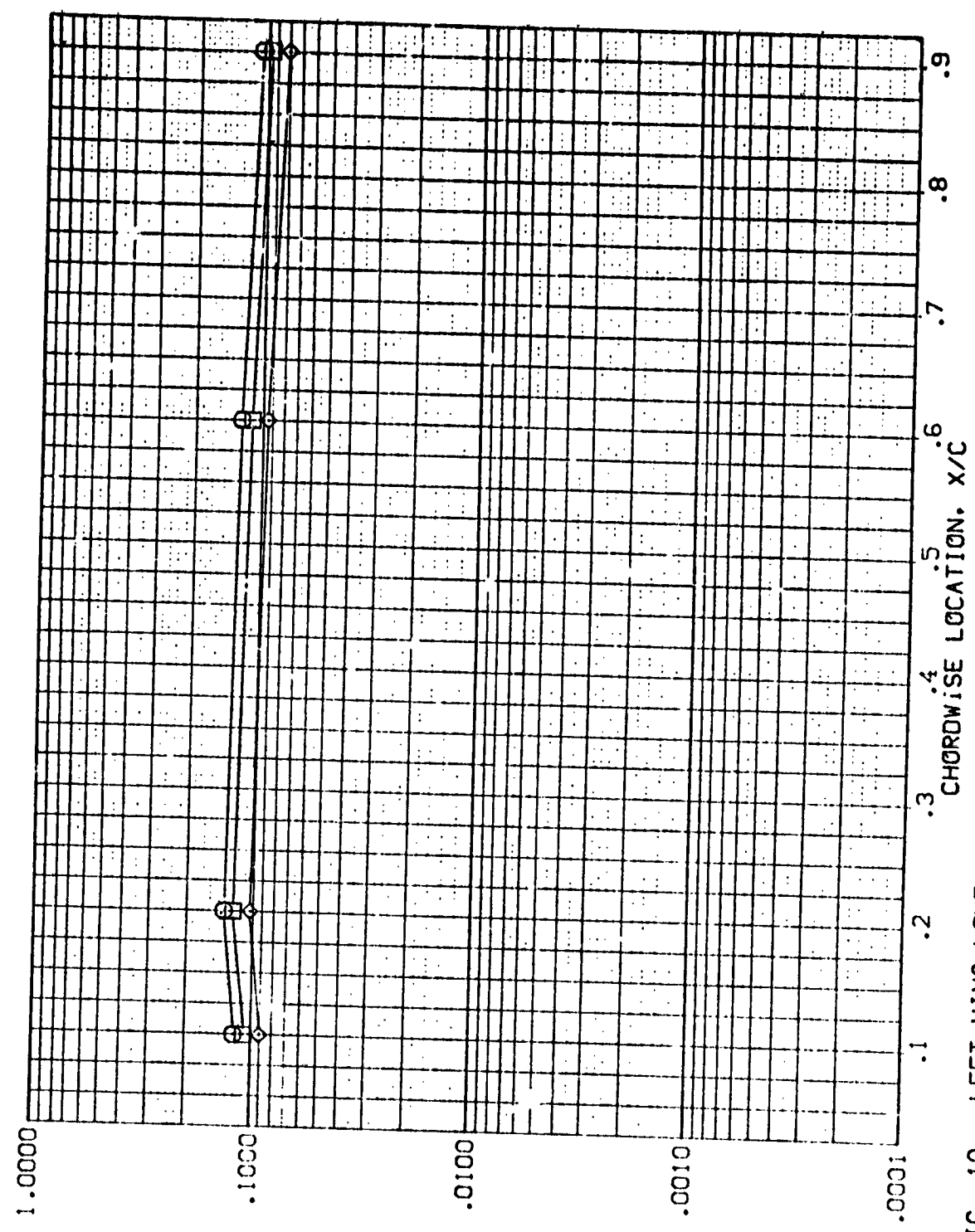


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV F22)

SYMBOL
 □
 ◇
 1.000

MAW/MT
 .850
 .900
 1.000

2Y/B
 .800

MACH
 5.220

PARAMETRIC VALUES
 ALPHA
 90.000
 BETA
 1.000
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

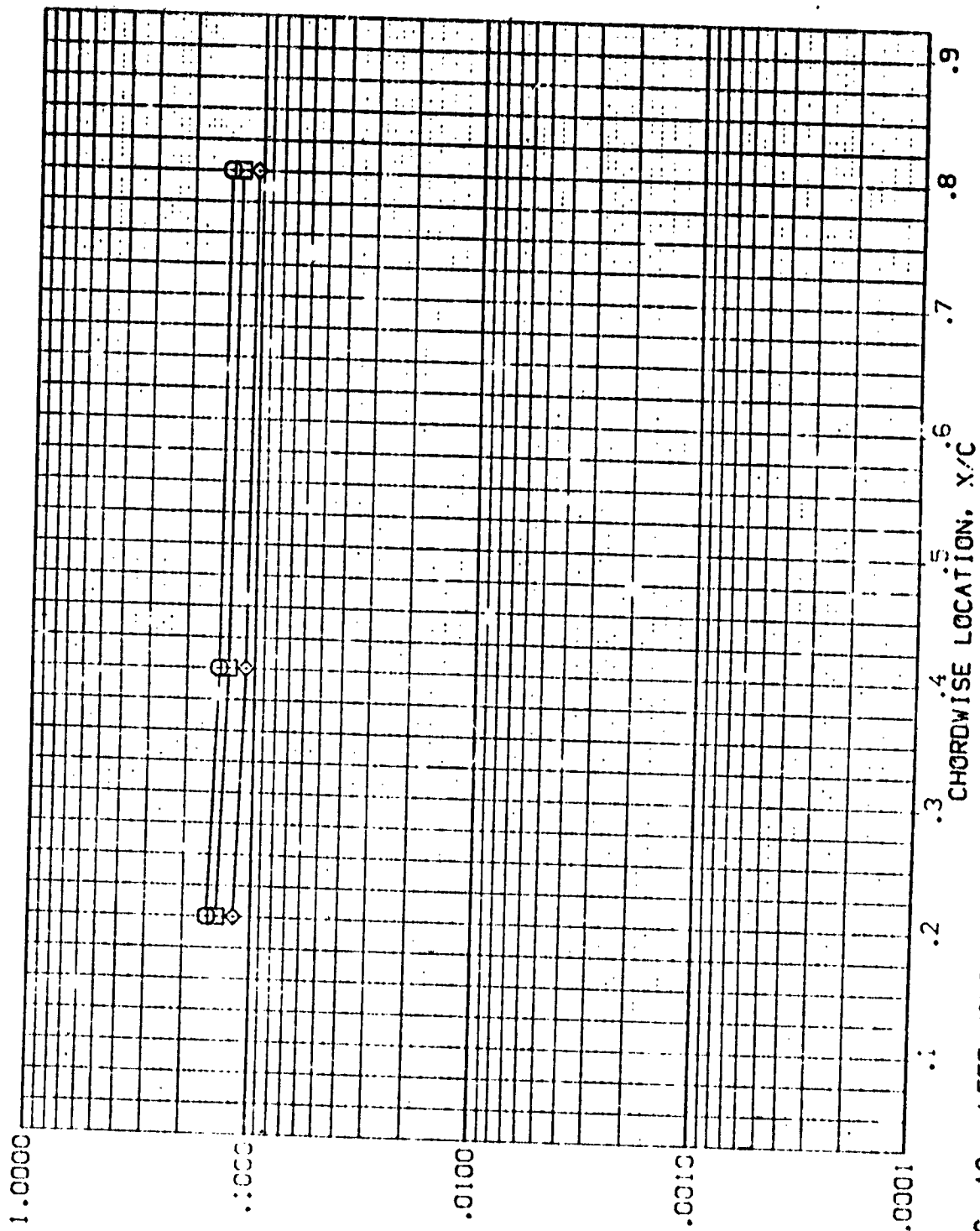


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 1428 01

WING LOWER SURFACE

(REV F23)

SYMBOL

HA/HREF

2Y/B

MACH

.950

.400

5.220

.900

1.000

PARAMETRIC VALUES

120.000

BETA

1.000

ALPHA

RV/L

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

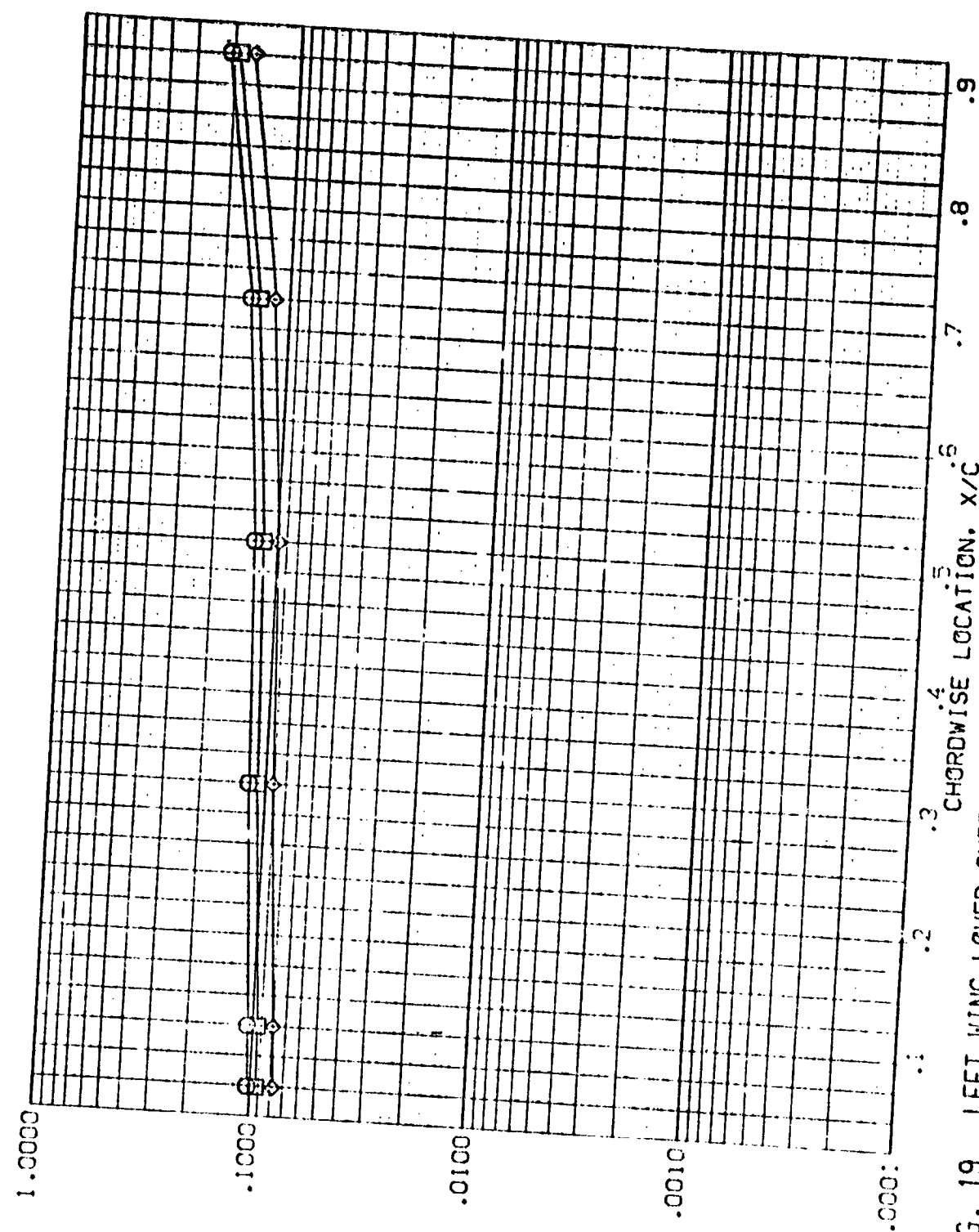


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

SYMBOL
 ◇
 □
 ○

HAW/HT .850
 .900
 .950
 1.000

2Y/B .600
 MACH 5.220

PARAMETRIC VALUES
 ALPHA 120.000
 RV/L 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

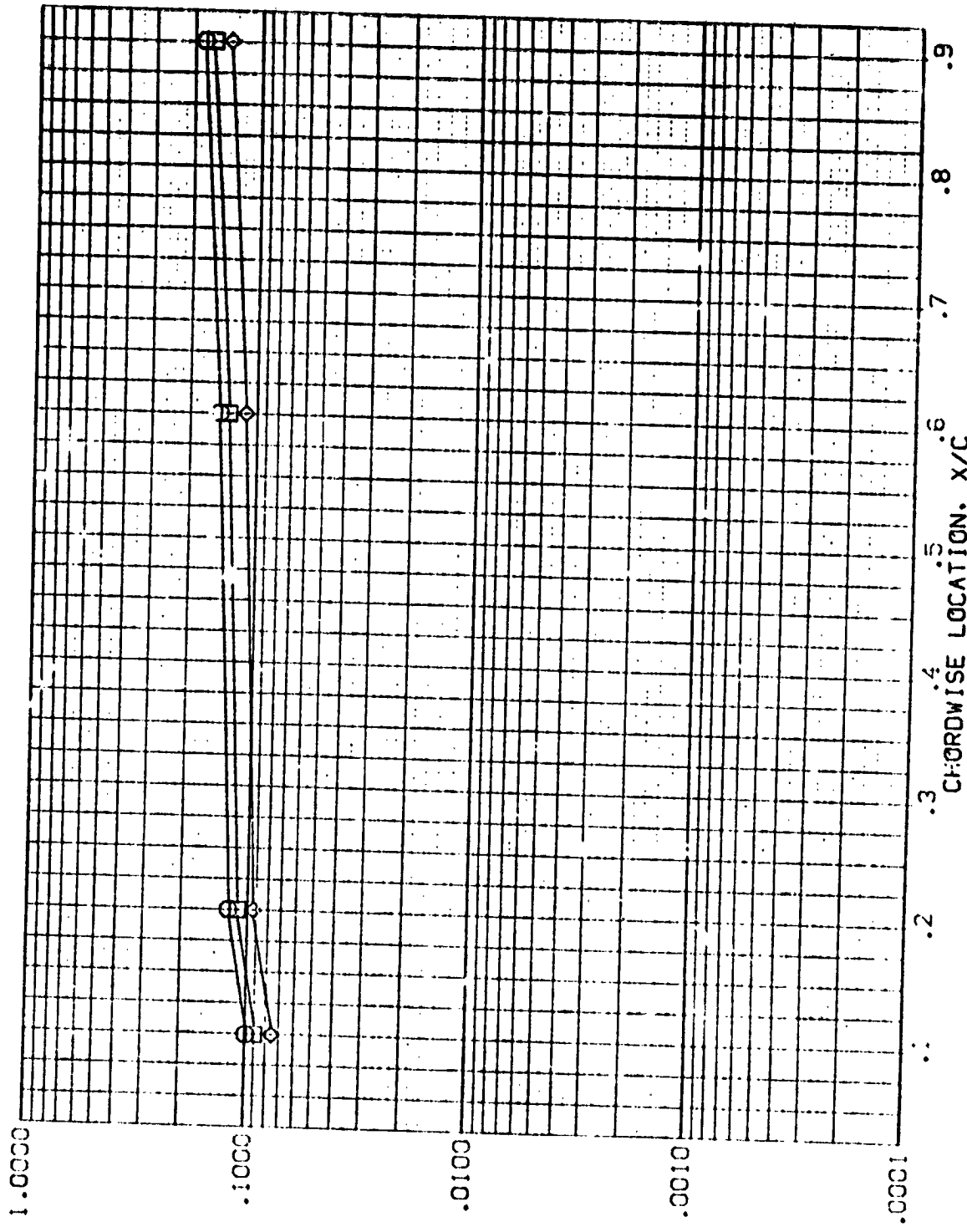


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REV23)

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RV/L 1.000

SYMBOL HAW/HT 2Y/B MACH
 .850 .500 5.220
 .900
 1.000

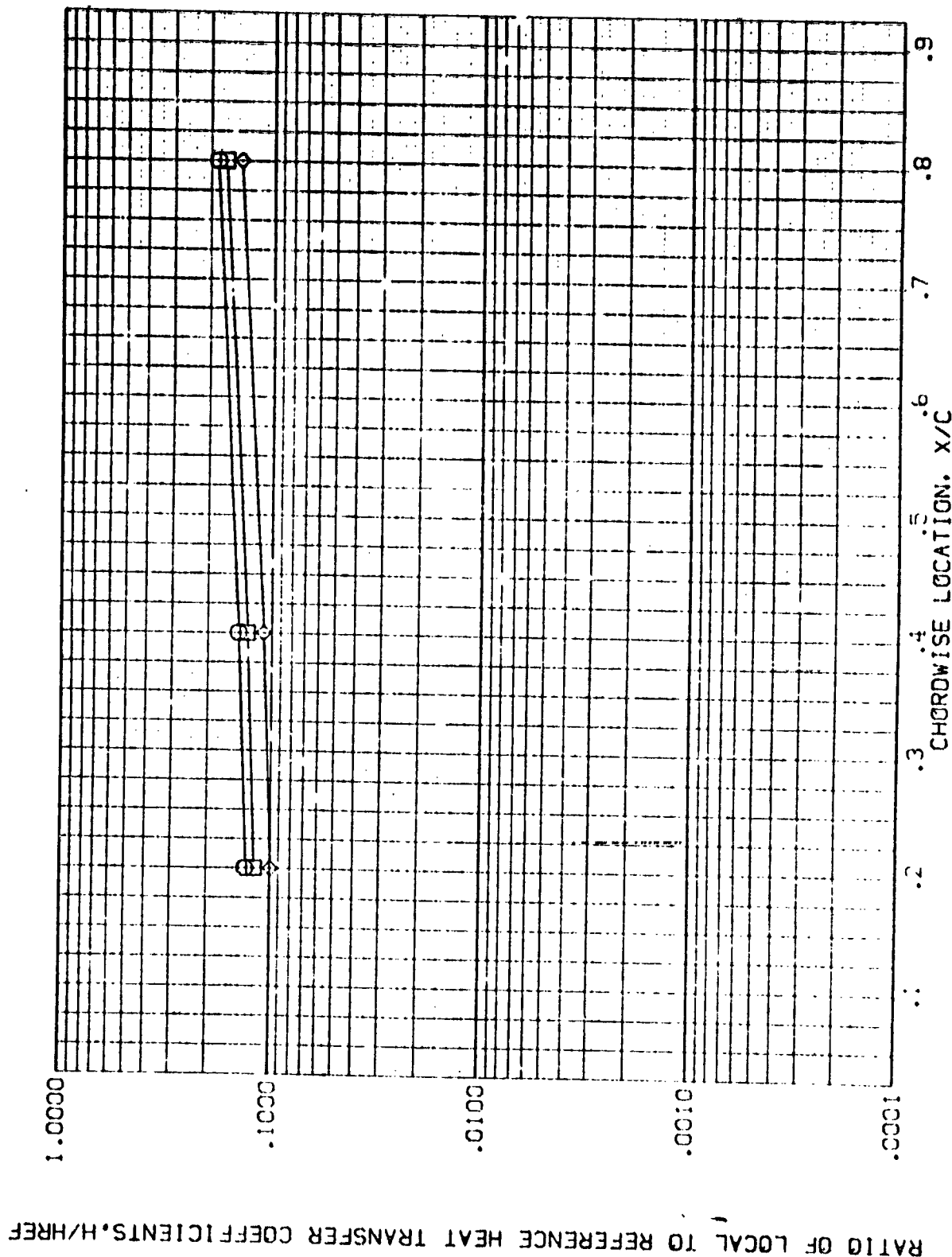


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 1H28 01

WING LOWER SURFACE (REV F24)

SYMBOL
 \diamond
 \square

HA/WAT 2Y/B MACH
 .650 .400 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -1.2 .000 BETA .000
 RV/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

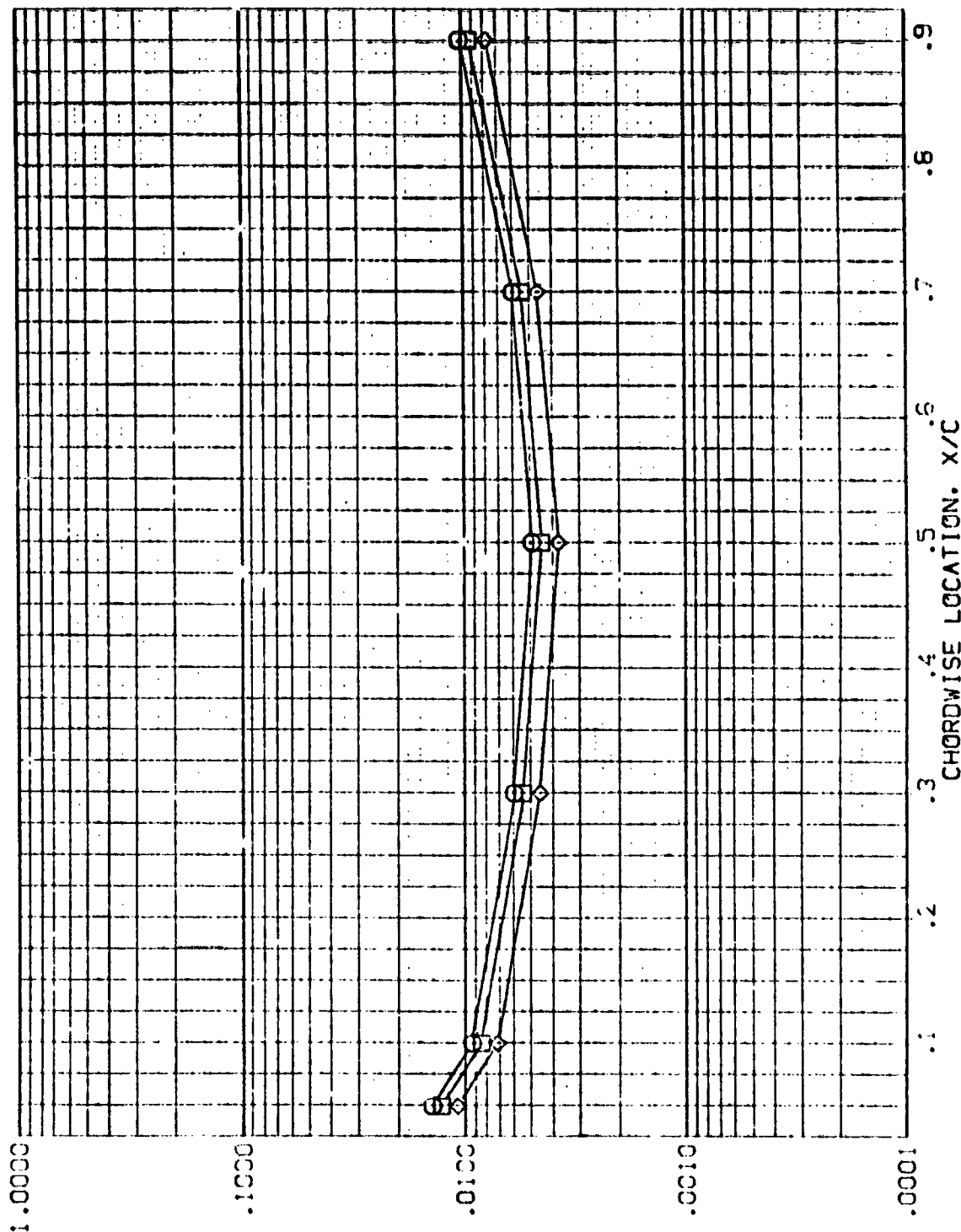


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 1428 01 WING LOWER SURFACE (REV F24)

SYMBOL	HAIR/HT	2 nd /B	MACH	PARAMETRIC VALUES
□	.850	.600	5.220	ALPHA -120.000
◇	.900			BETA 1.000
◇	1.000			

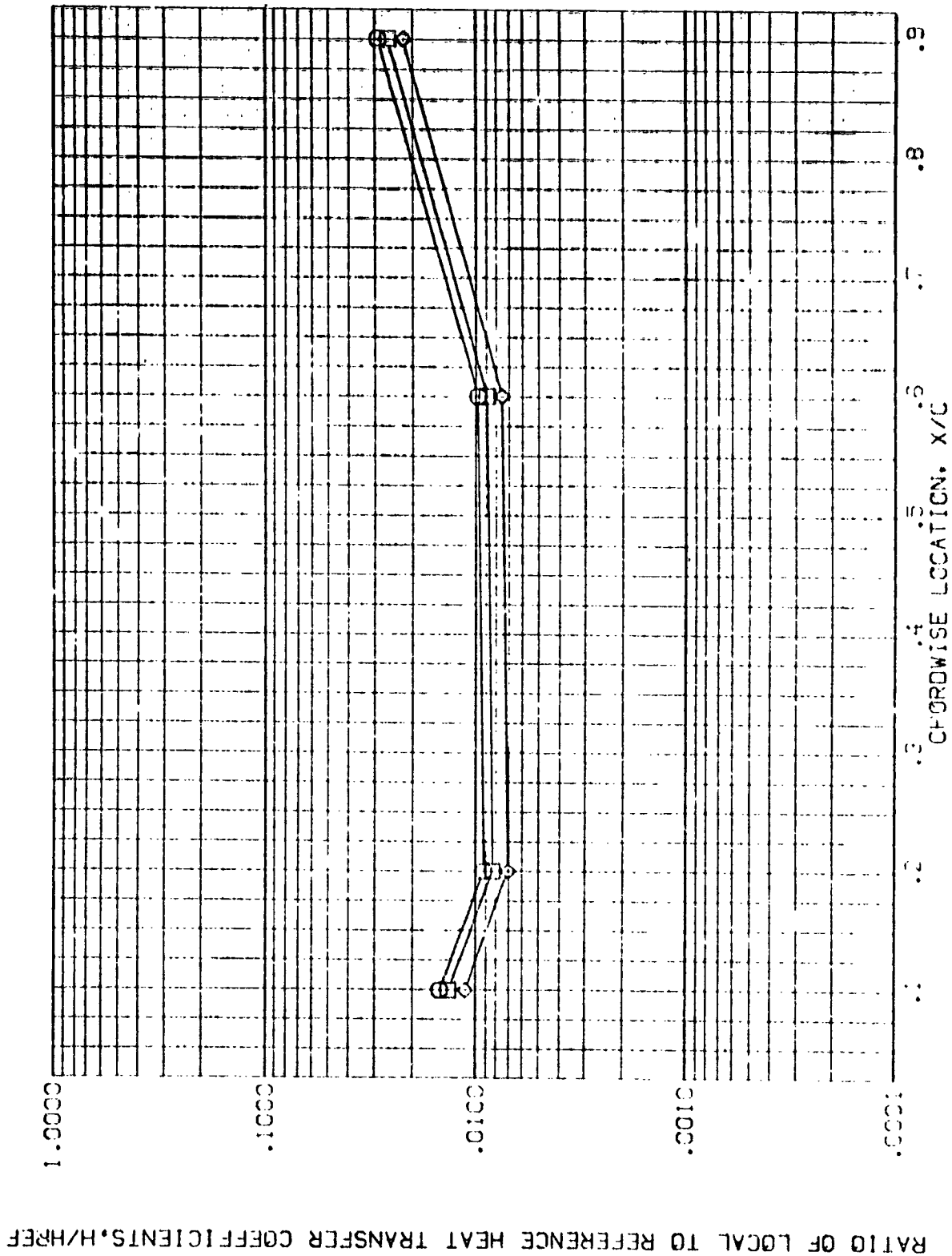


FIG. 19 LEFT WING LOWER SURFACE, CRITERION ALONE

AMES 3.5-195 1H28 01

WING LOWER SURFACE

(REV F24)

SYMBOL
 ◊
 □
 ◻

HAW/HT
 .850
 .900
 1.000

2Y/B
 .800

MACH
 5.220

PARAMETRIC VALUES
 ALPHA
 RN/L
 BETA
 1.000
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

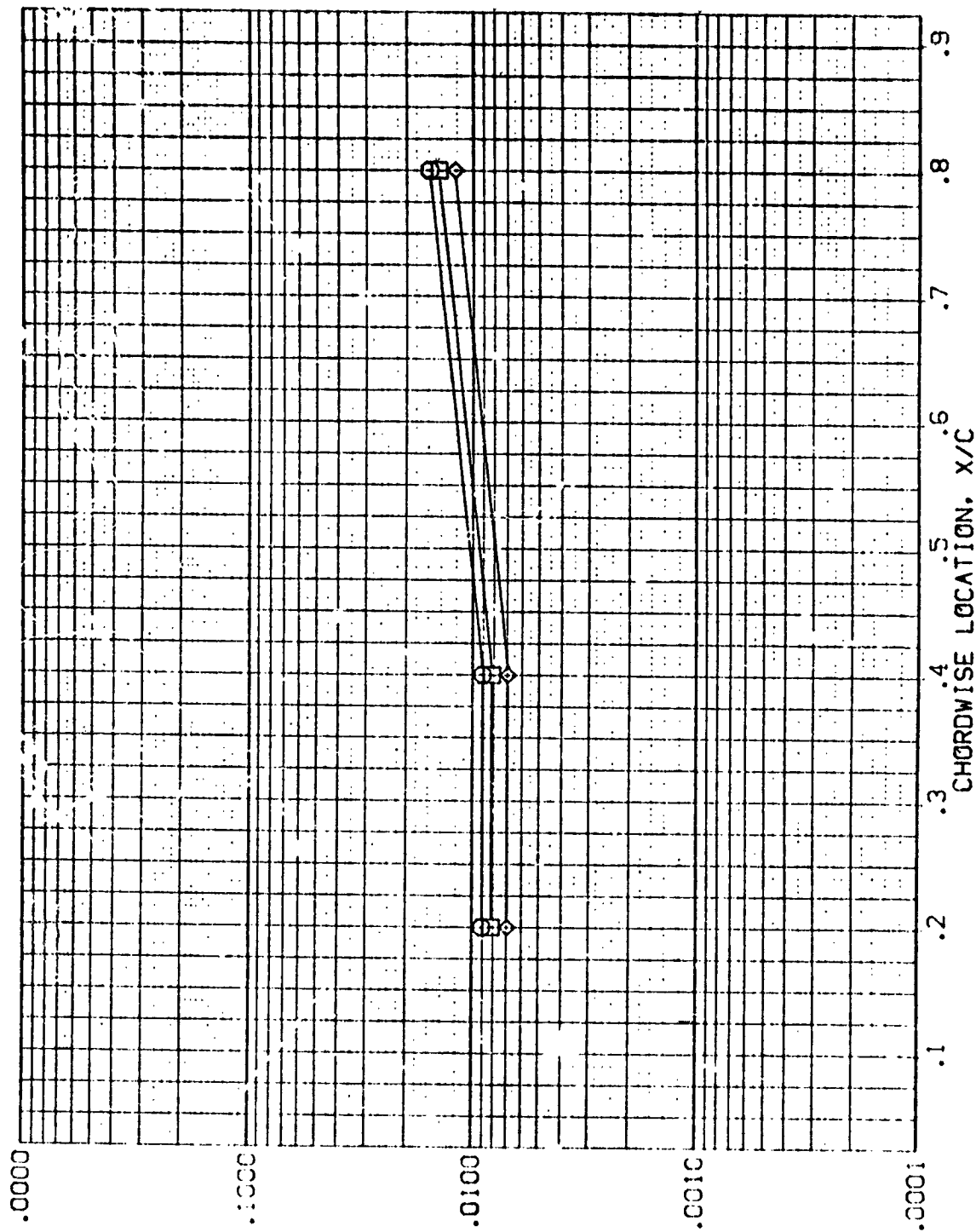


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 C: WING LOWER SURFACE (REV25)

SYMBOL	MAN/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.219	ALPHA
◇	.900			RN/L
◇	1.000			-90.000
				BE*A
				1.000
				.000

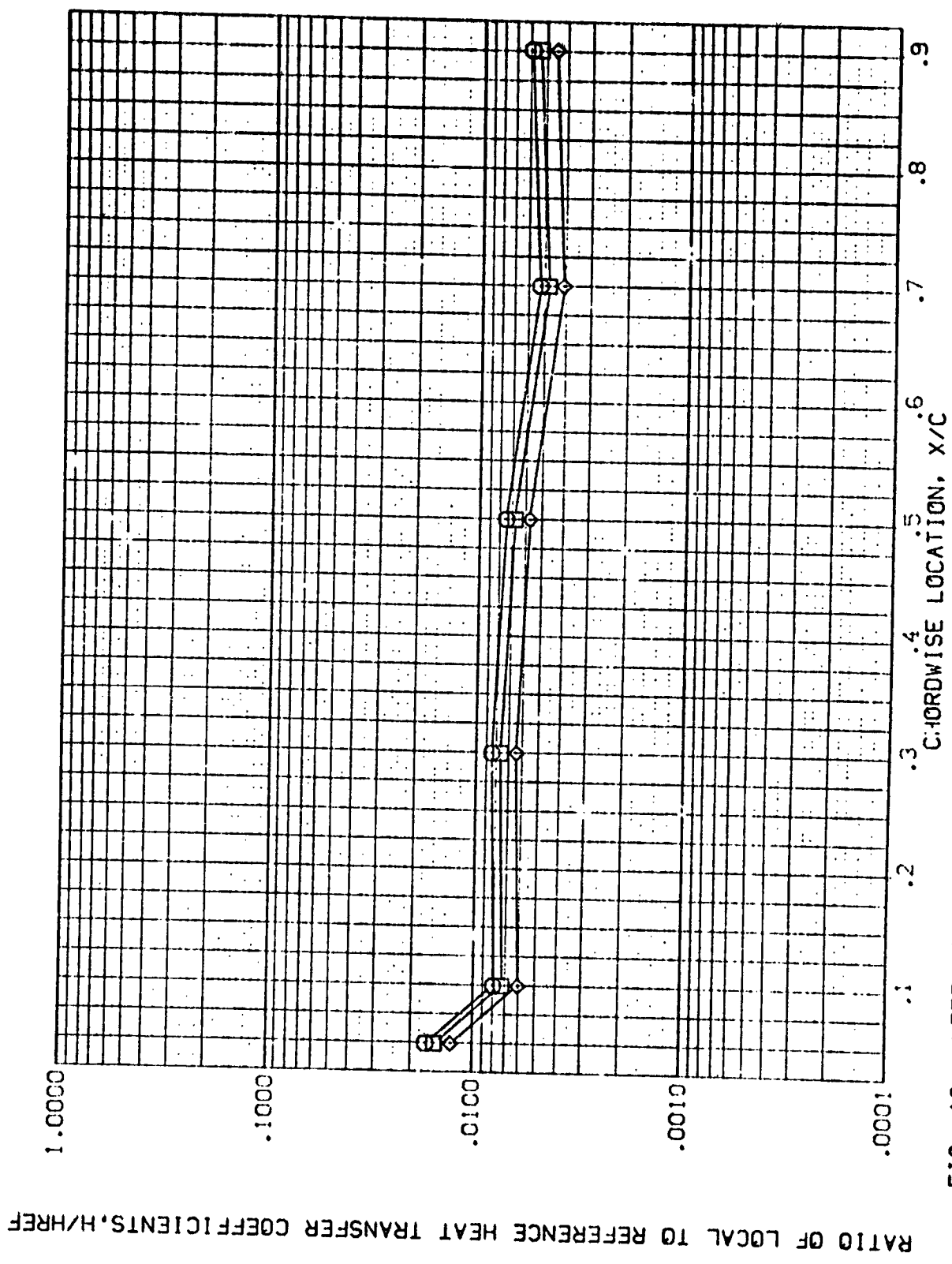


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING LOWER SURFACE

(REVF25)

SYMBOL
□
◇

HAW/HT 2Y/B MACH
.650 .600 5.219
.900 1.000

PARAMETRIC VALUES
-90.000 BETA .000
RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

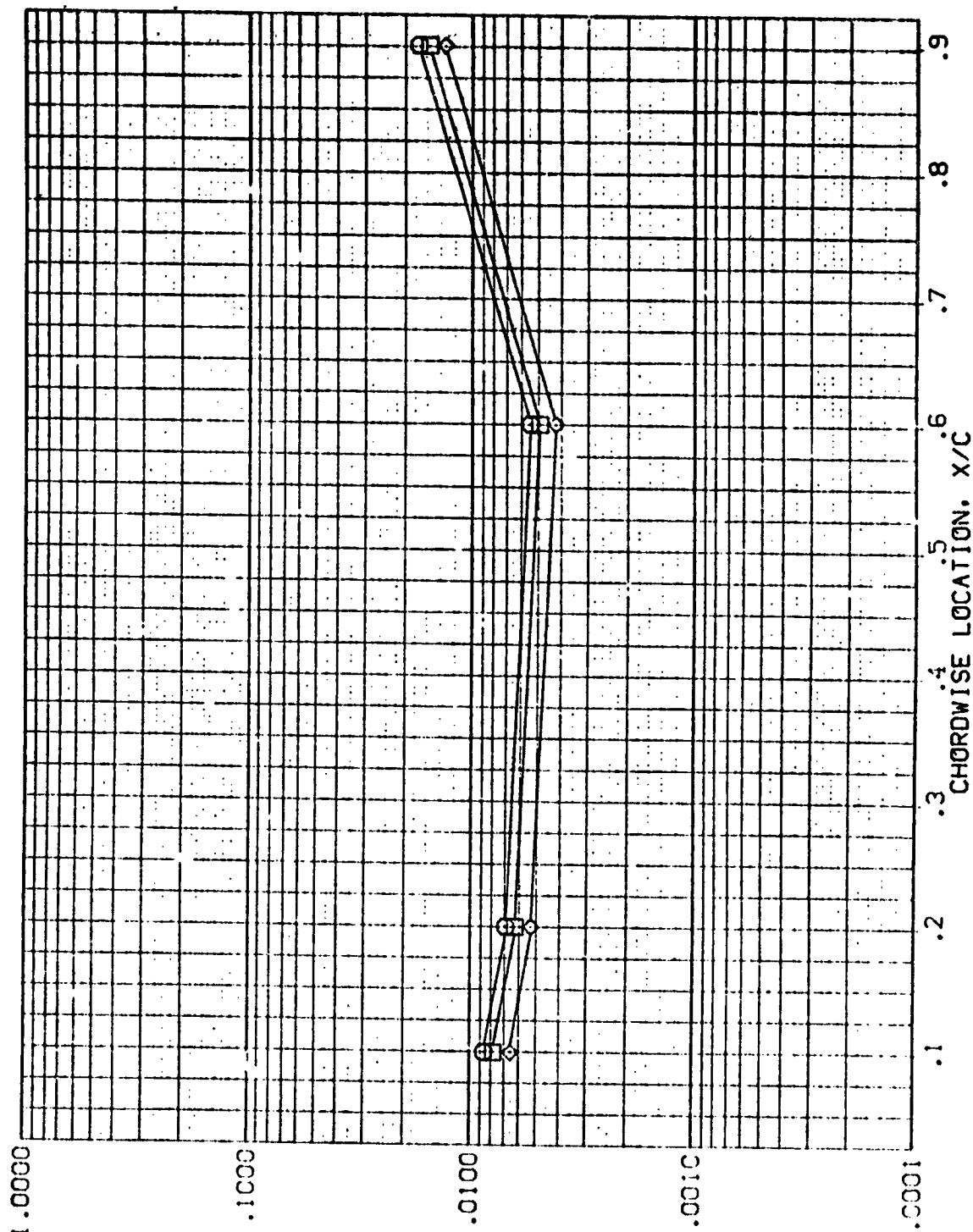


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

(REV F25)

WING LOWER SURFACE

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
ALPHA
RN/L
-90.000
1.000
0.000

SYMBOL
HAW/HT
2Y/B
MACH
0.850
0.900
1.000
0.800
5.219

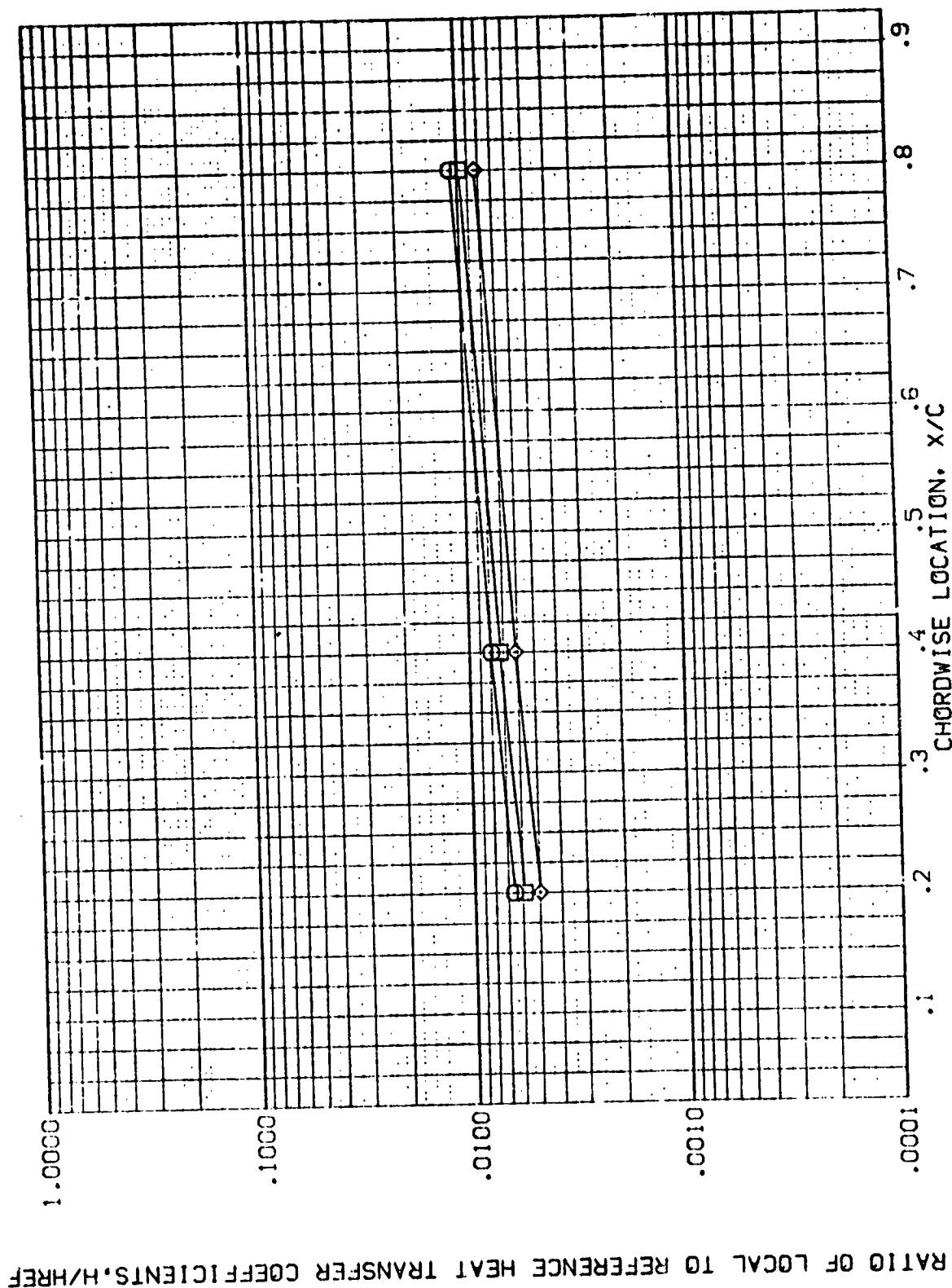


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 0: WING LOWER SURFACE (REVF26)

SYMBOL	HAU/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.220	ALPHA
◇	.900			RN/L
◇	1.000			BETA
				.000

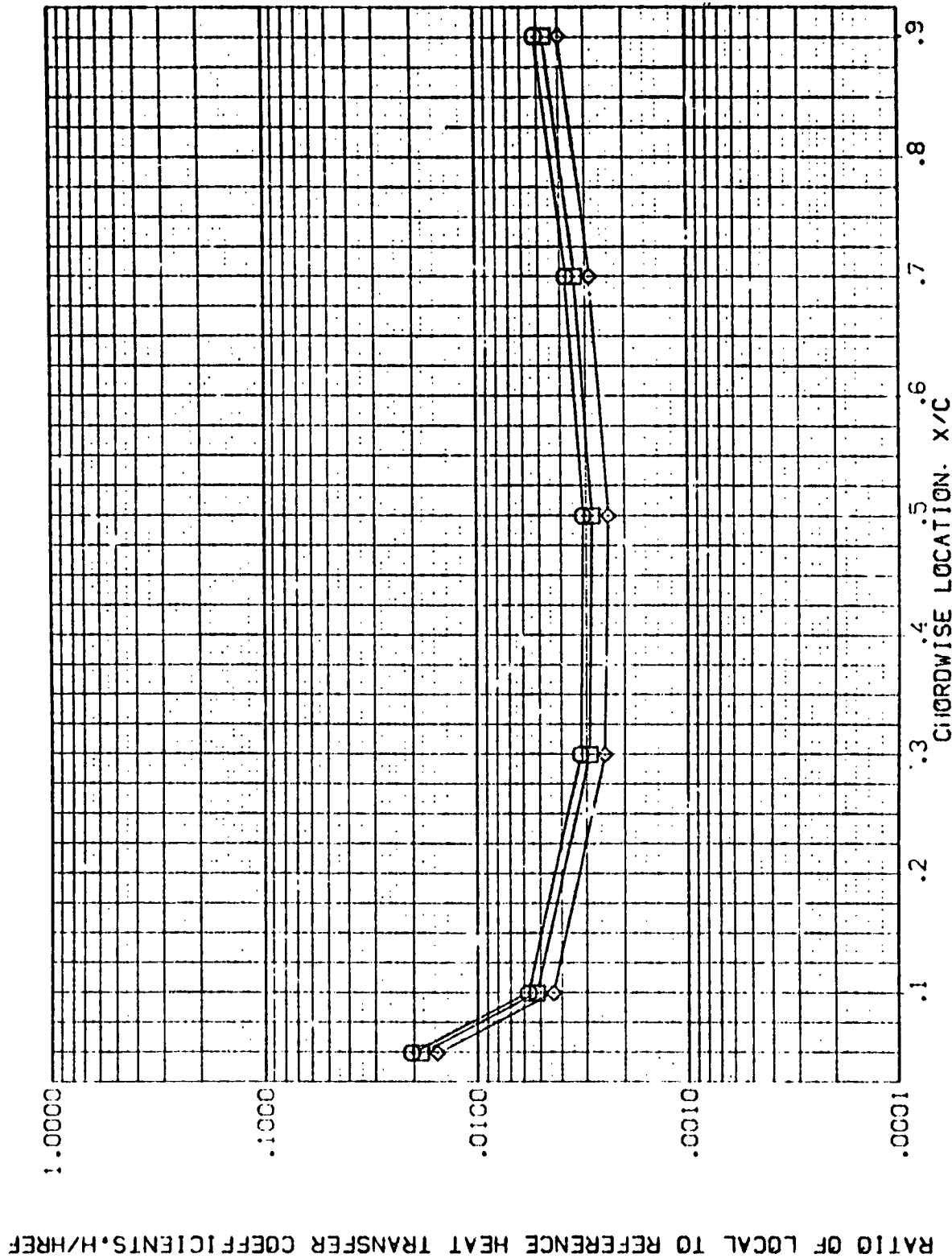


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

(REV F26)

SYMBOL ☐ ☐ ☐

1.000
.900
.850
HAW/HT

24/B	MACH
.600	5.220

MACH 5.22

PARAMETRIC VALUES	
ALPHA	BETA
RN/L	-60.000
	1.000

PARAMETRIC VALUES	BETA	.000
-60.000		
1.000		

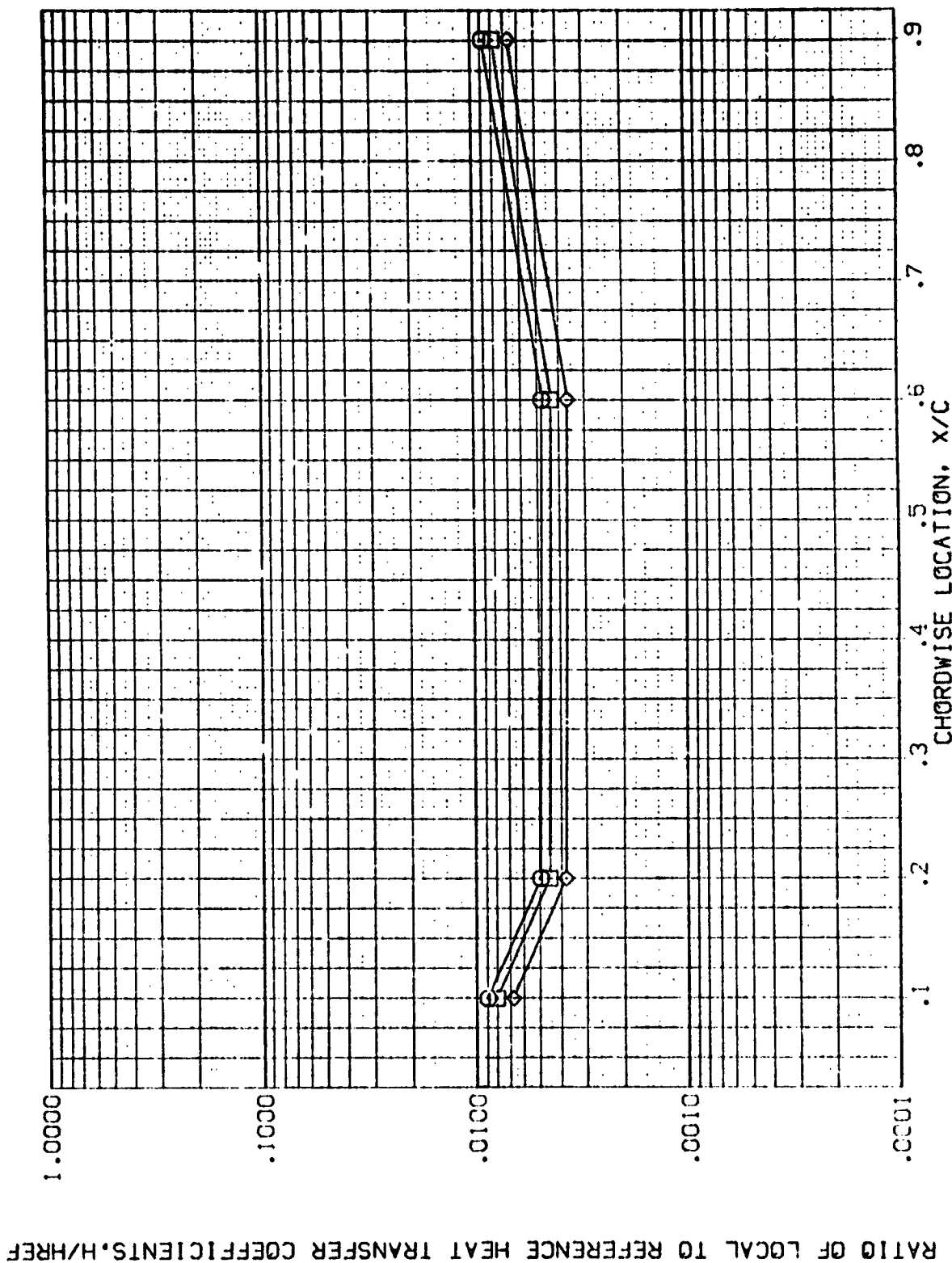


FIG. 19. LEFT WING LOWER SURFACE, ORBITER ALONE

(REV F26)

WING LOWER SURFACE

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
-60.000 BETA
1.000

ALPHA
RN/L

MACH
5.220

2Y/B
.900

MAW/HT
.850
.900
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

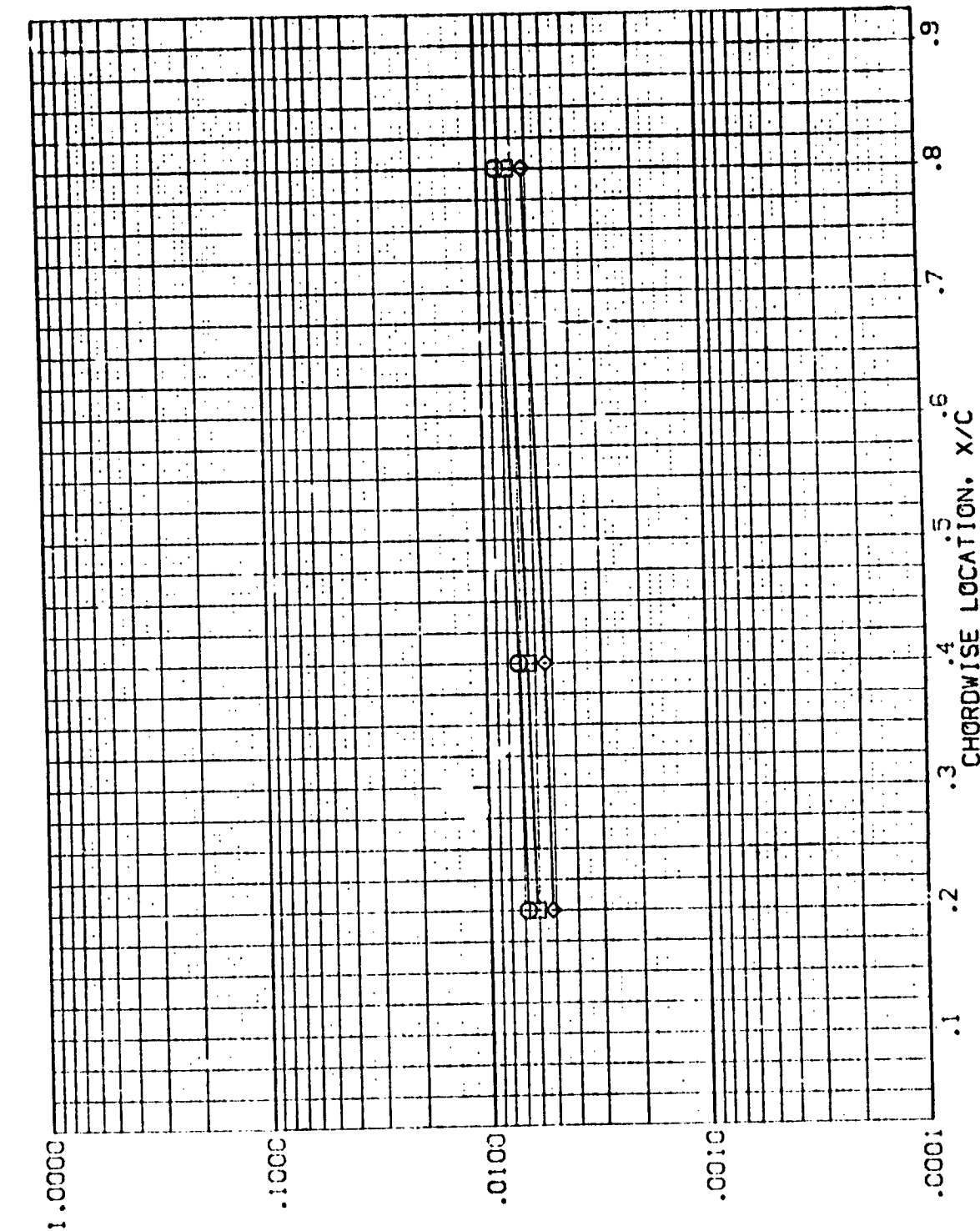


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 1H28 01

WING LOWER SURFACE

(REV F27)

PARAMETRIC VALUES
-30.000 BETA .000
1.000

ALPHA
RN/L

MACH
5.220

ZY/B
.400

HA/WHT
.850
.900
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

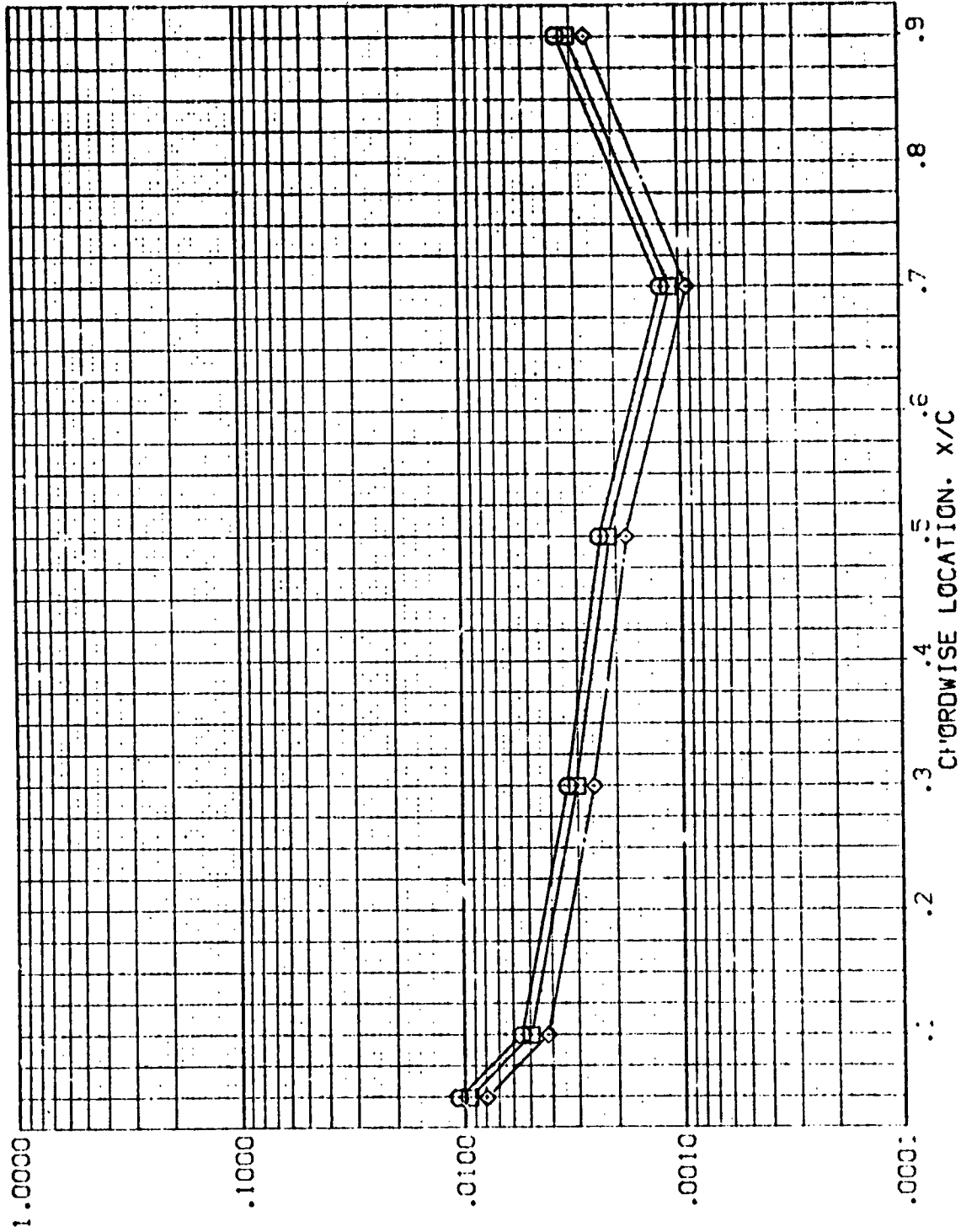


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

ALPHA
RN, L

SYMBOL	HAZ/WT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

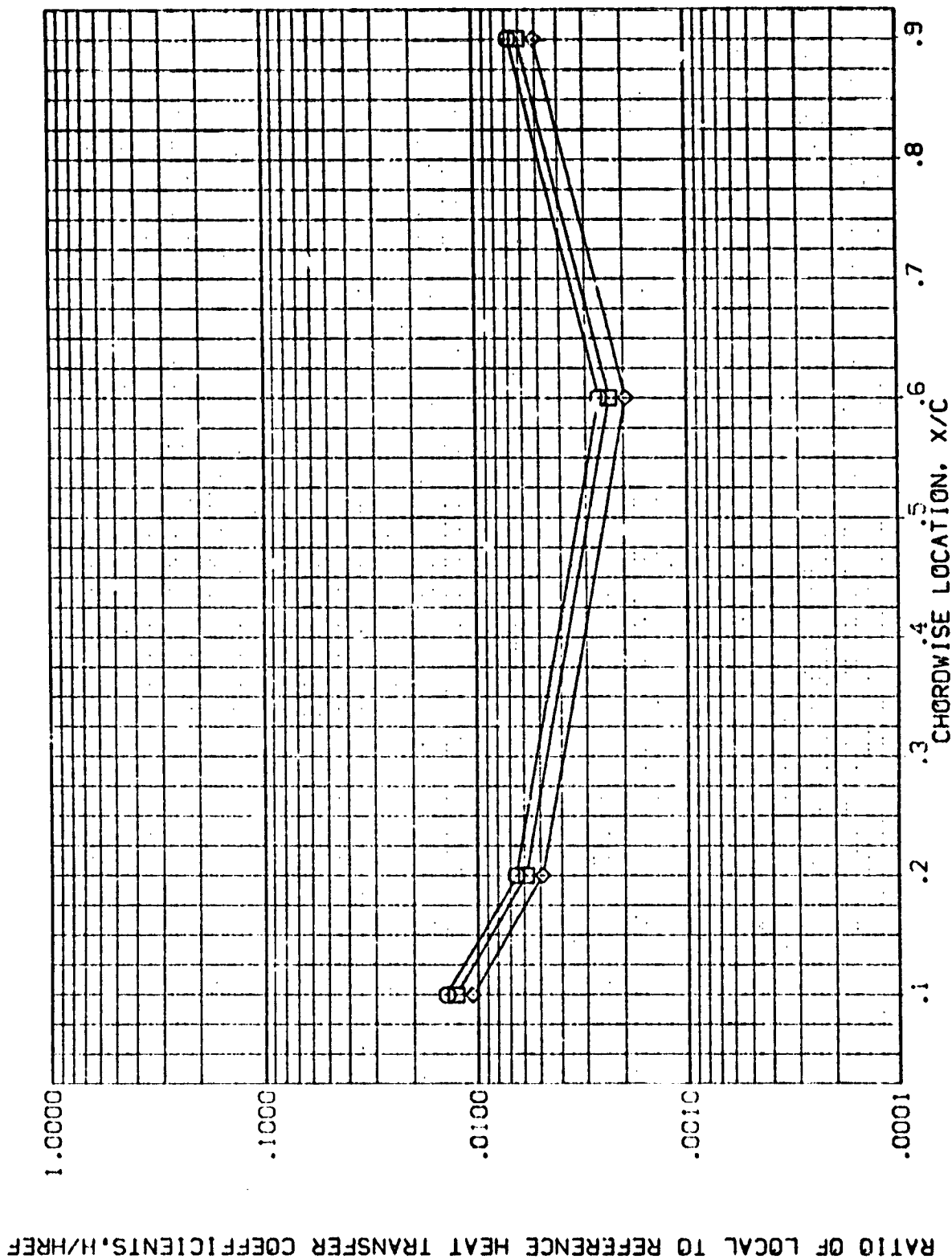


FIG. 19. LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 C1 WING LOWER SURFACE (REV27)

PARAMETRIC VALUES
 ALPHA -30.000 BETA .000
 RN/L 1.000

SYMBOL HAW/HT 2 γ /B MACH
 ◇ .85C 5.220
 ○ .90C
 ◊ 1.00C

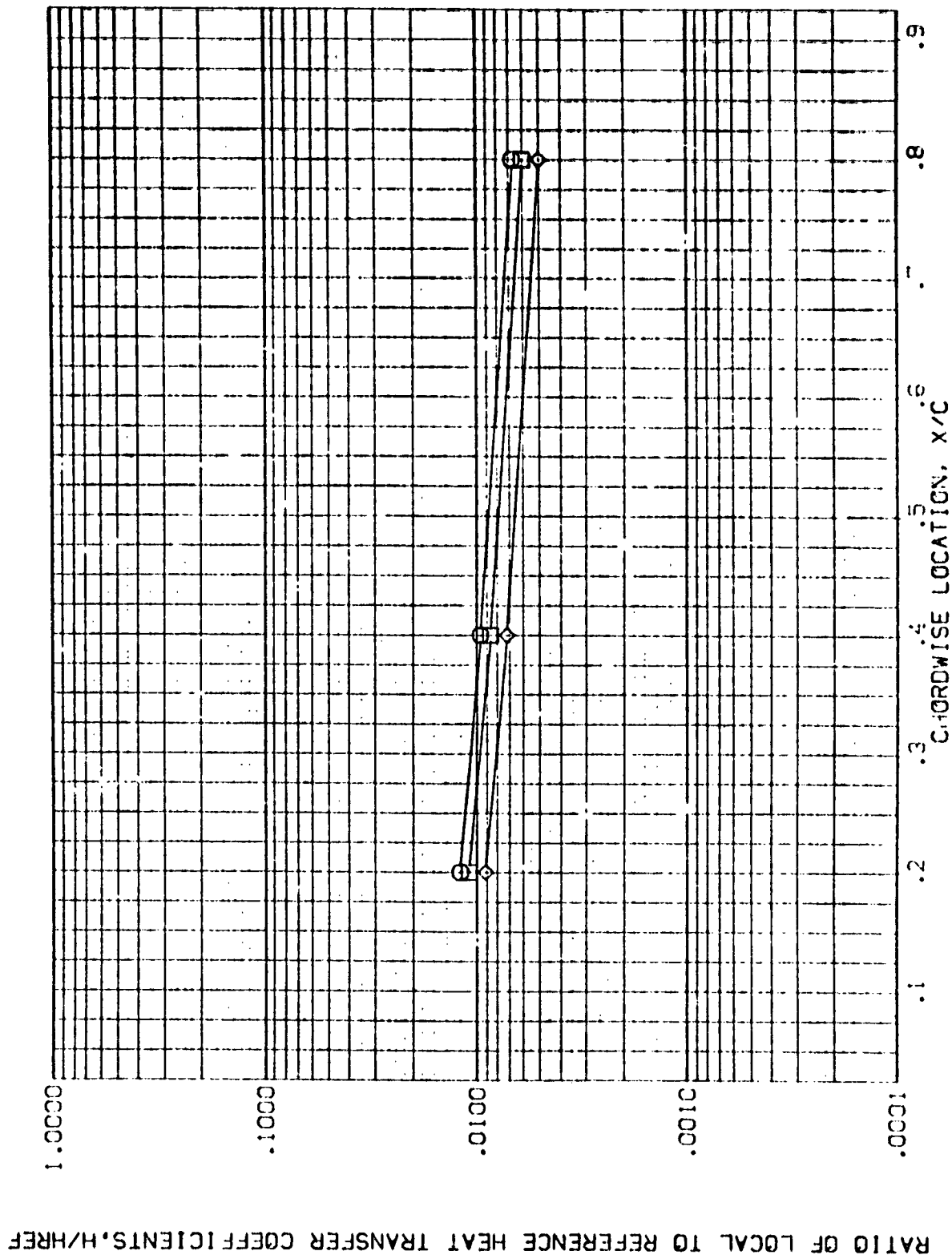


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA β ° ρ W/L

(REV 19) AYES 3.5-105 1428 01 WING LOWER SURFACE .000 .000 1.000

(REV 19) AYES 3.5-105 1428 01 WING LOWER SURFACE .000 .000 1.000

(REV 19) AYES 3.5-105 1428 01 WING LOWER SURFACE .000 .000 1.000

(REV 19) AYES 3.5-105 1428 01 WING LOWER SURFACE .000 .000 1.000

(REV 19) AYES 3.5-105 1428 01 WING LOWER SURFACE .000 .000 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

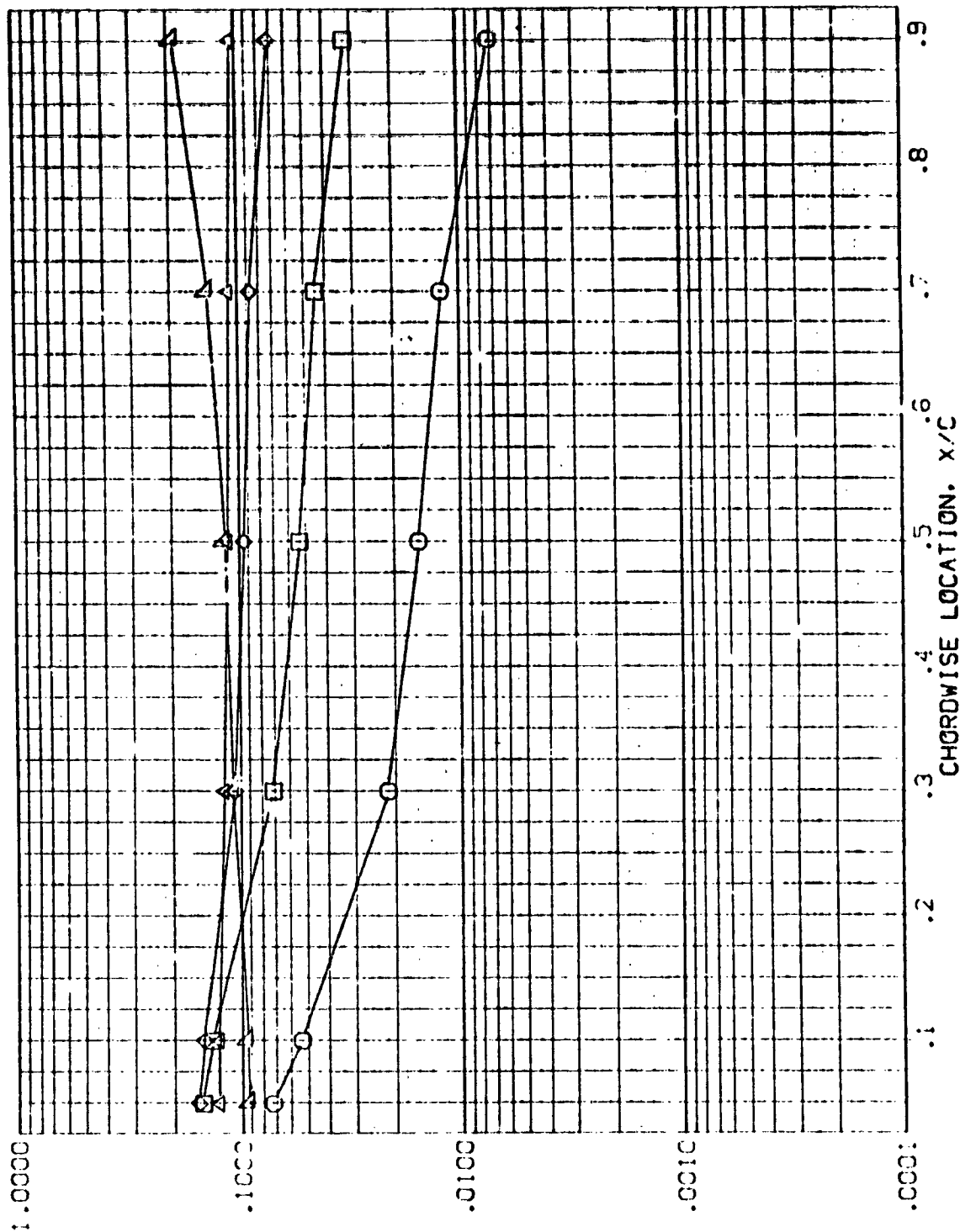
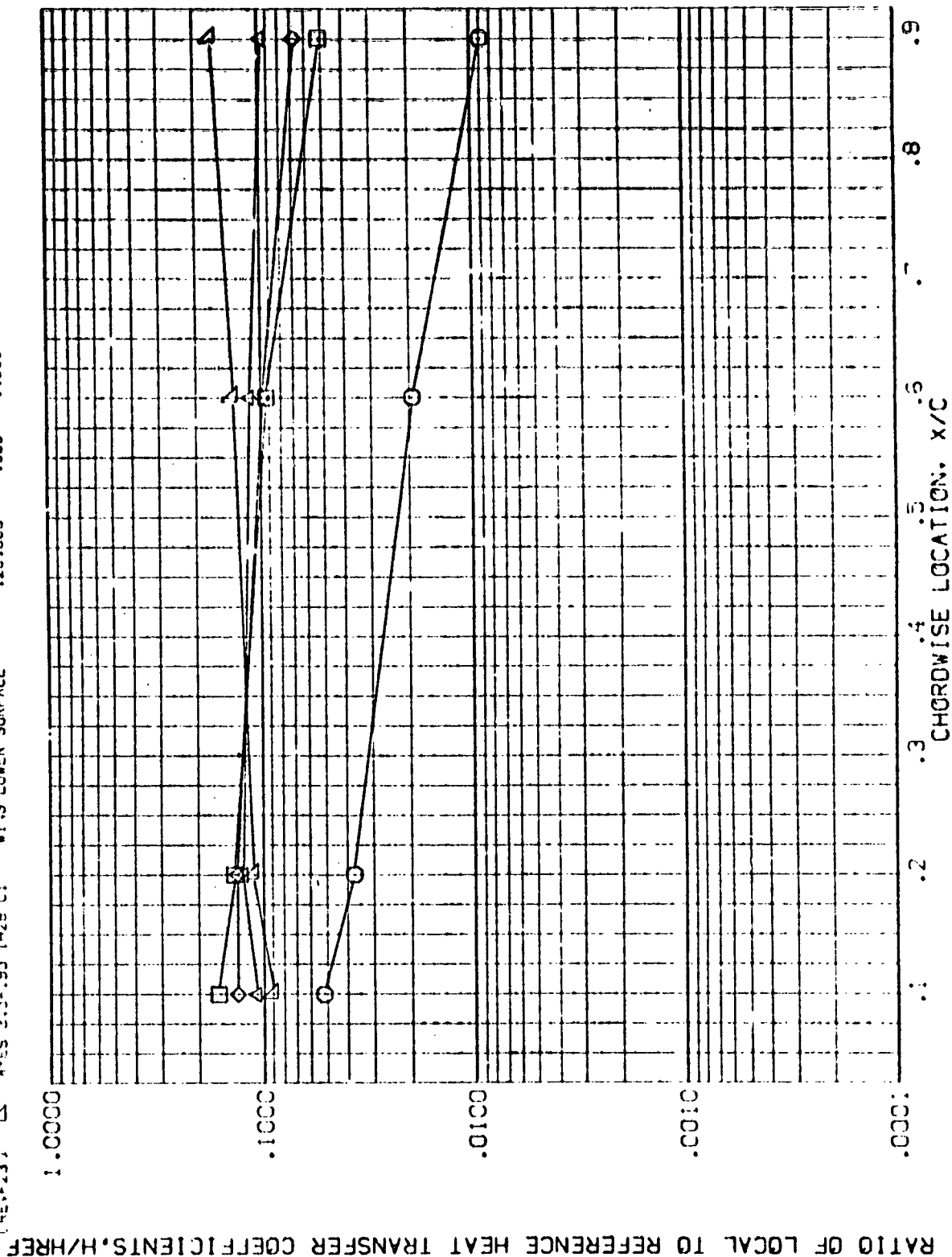


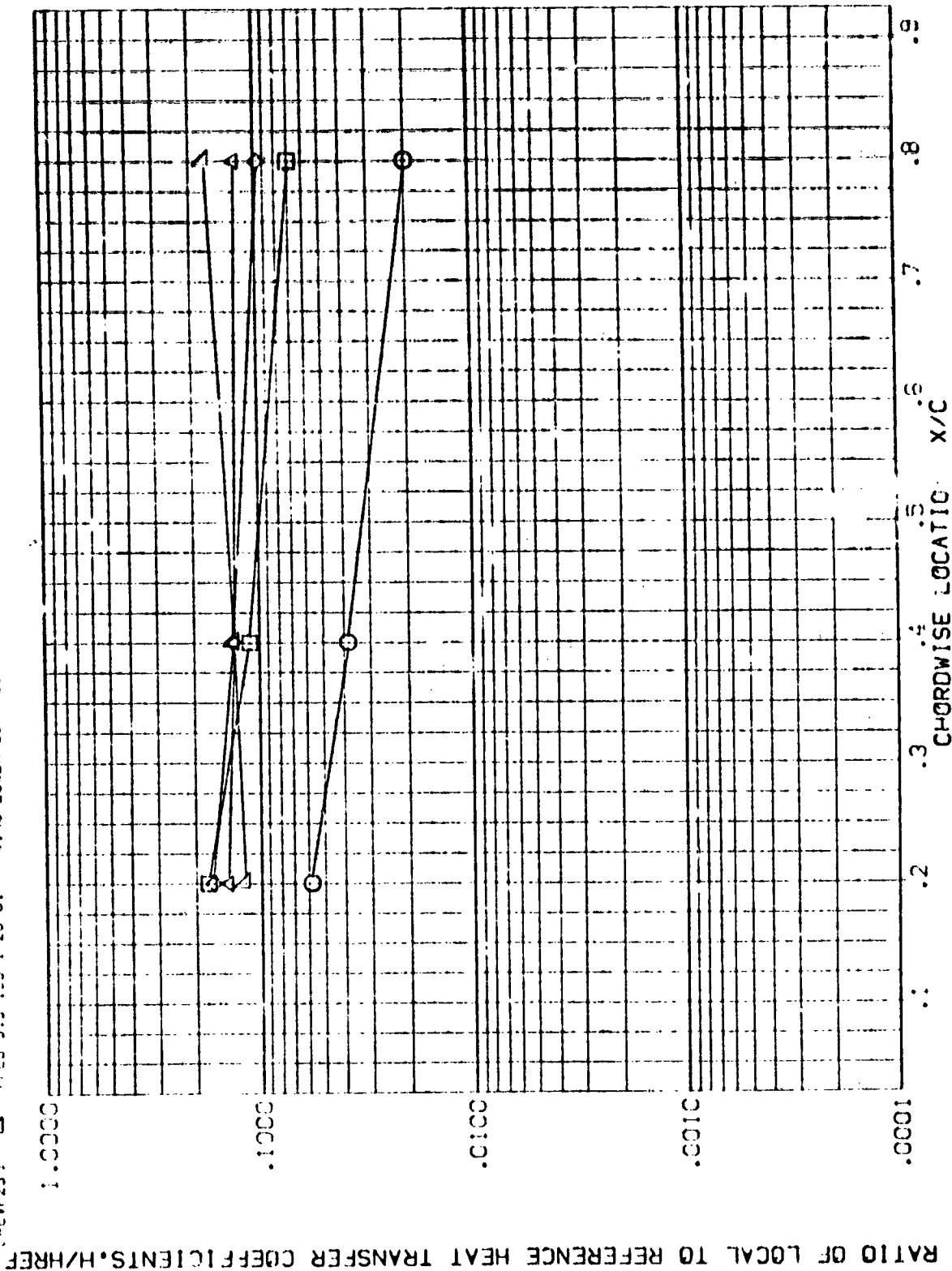
FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

MACH = 5.300 $\rho W/L = 1.000$ $2V/B = .400$

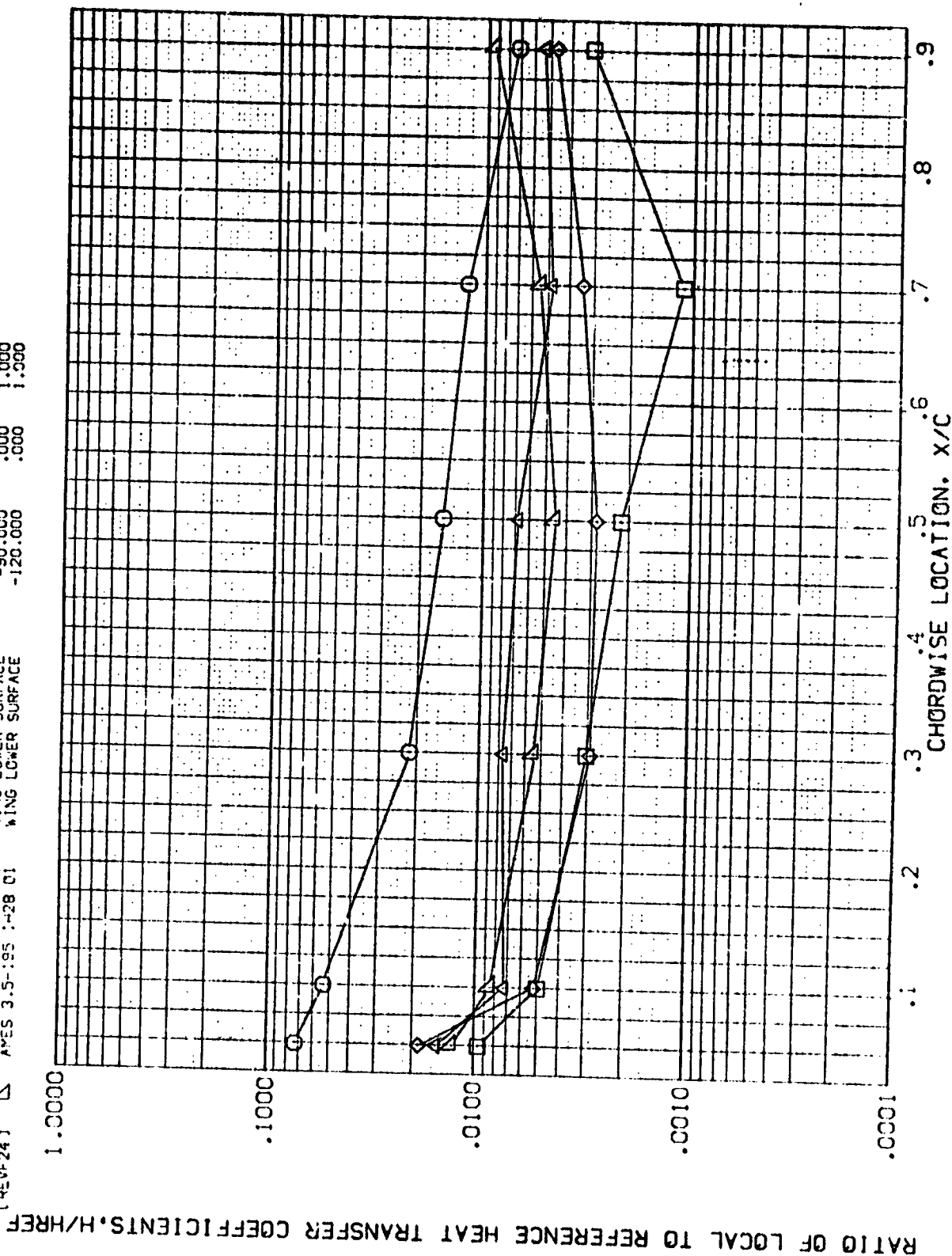
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RV/L
000001	WING LOWER SURFACE	.000	.000	1.000
000002	WING LOWER SURFACE	.30.000	.000	1.000
000003	WING LOWER SURFACE	.60.000	.000	1.000
000004	WING LOWER SURFACE	.90.000	.000	1.000
000005	WING LOWER SURFACE	.120.000	.000	1.000



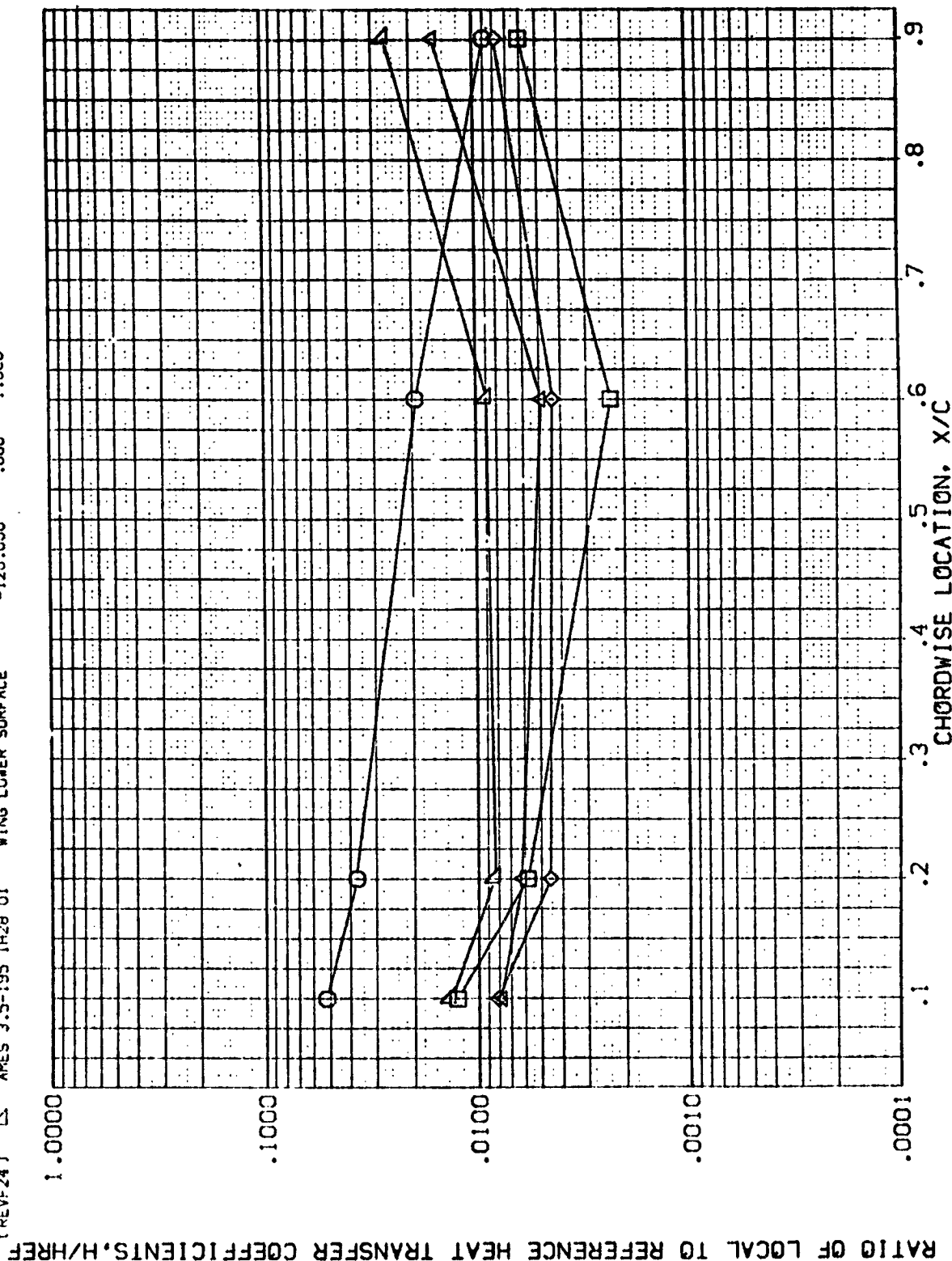
DATA SET	NUMBER	CONFIGURATION DESCRIPTION	ALPHA	BETA	PAUL
000000	0000	WING LOWER SURFACE	0000	000000	0000000
000000	0001	WING LOWER SURFACE	30.0000	000000	0000000
000000	0002	WING LOWER SURFACE	60.0000	000000	0000000
000000	0003	WING LOWER SURFACE	90.0000	000000	0000000
000000	0004	WING LOWER SURFACE	120.0000	000000	0000000



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REV19)	AMES 3.5-195 (H28 01)	.000	.000	1.000
(REV27)	AMES 3.5-195 (H28 01)	-30.000	.000	1.000
(REV26)	AMES 3.5-195 (H28 01)	-60.000	.000	1.000
(REV25)	AMES 3.5-195 (H28 01)	-90.000	.000	1.000
(REV24)	AMES 3.5-195 (H28 01)	-120.000	.000	1.000



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REF19)	AMES 3.5-195 1428 01	.000	.000	1.000
(REF27)	AMES 3.5-195 1428 01	-30.000	.000	1.000
(REF26)	AMES 3.5-195 1428 01	-60.000	.000	1.000
(REF25)	AMES 3.5-195 1428 01	-90.000	.000	1.000
(REF24)	AMES 3.5-195 1428 01	-120.000	.000	1.000



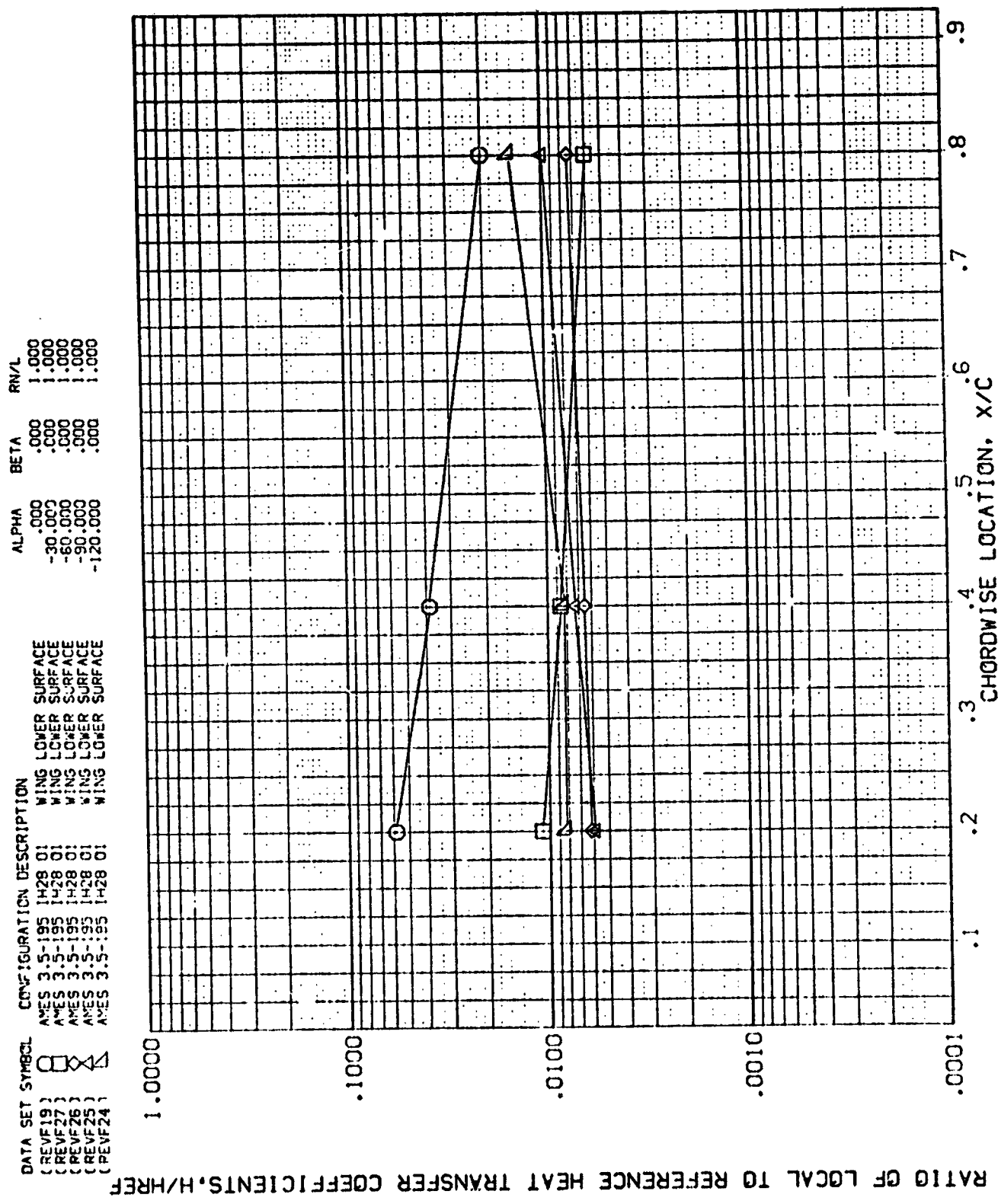


FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVFO1)

SYMBOL HAW/HT ZY/B MACH PARAMETRIC VALUES
 .850 .400 5.228 ALPHA BETA
 .900 PN/L .000
 1.000 1.000 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

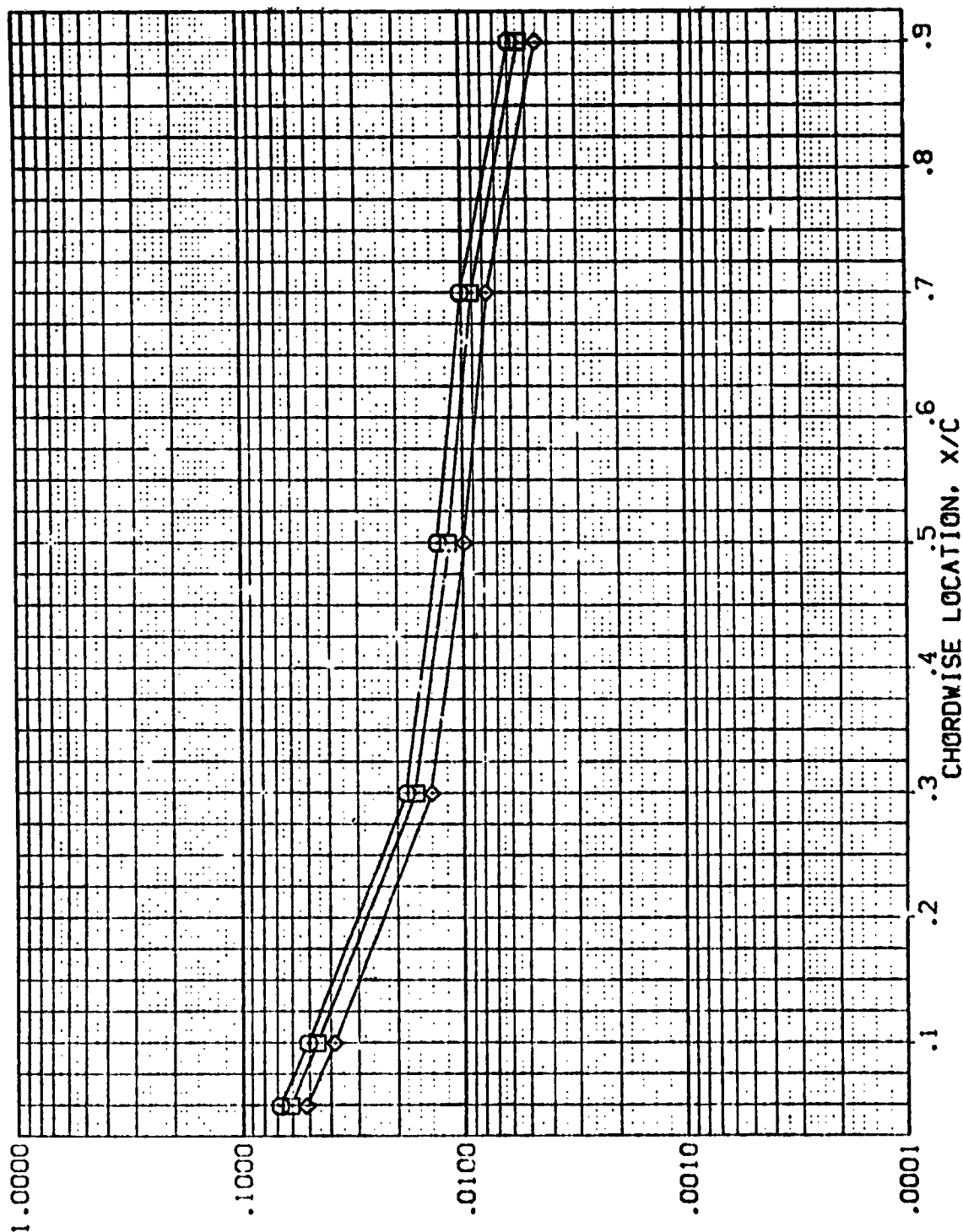


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 G1+T1 WING LOWER SURFACE (REV F01)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
□	.850	.600	5.228	.000	.000
◇	.900			1.000	
	1.000				

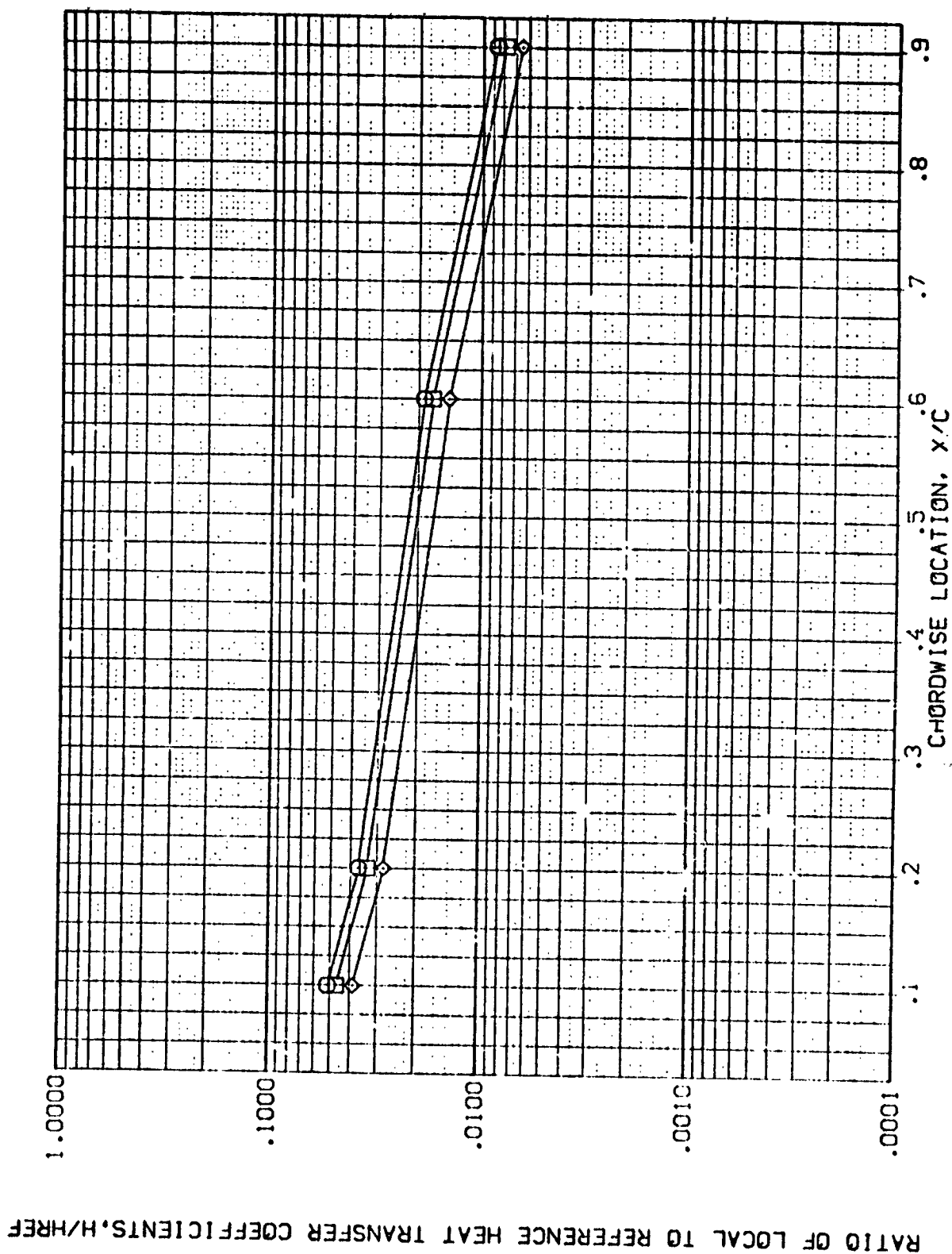


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVFO1)

SYMBOL
□
◇

MAW/HT
.650
.900
1.000

2Y/B
.600
MACH
5.228

PARAMETRIC VALUES
ALPHA
RN/L
.000
1.000
BETA
.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

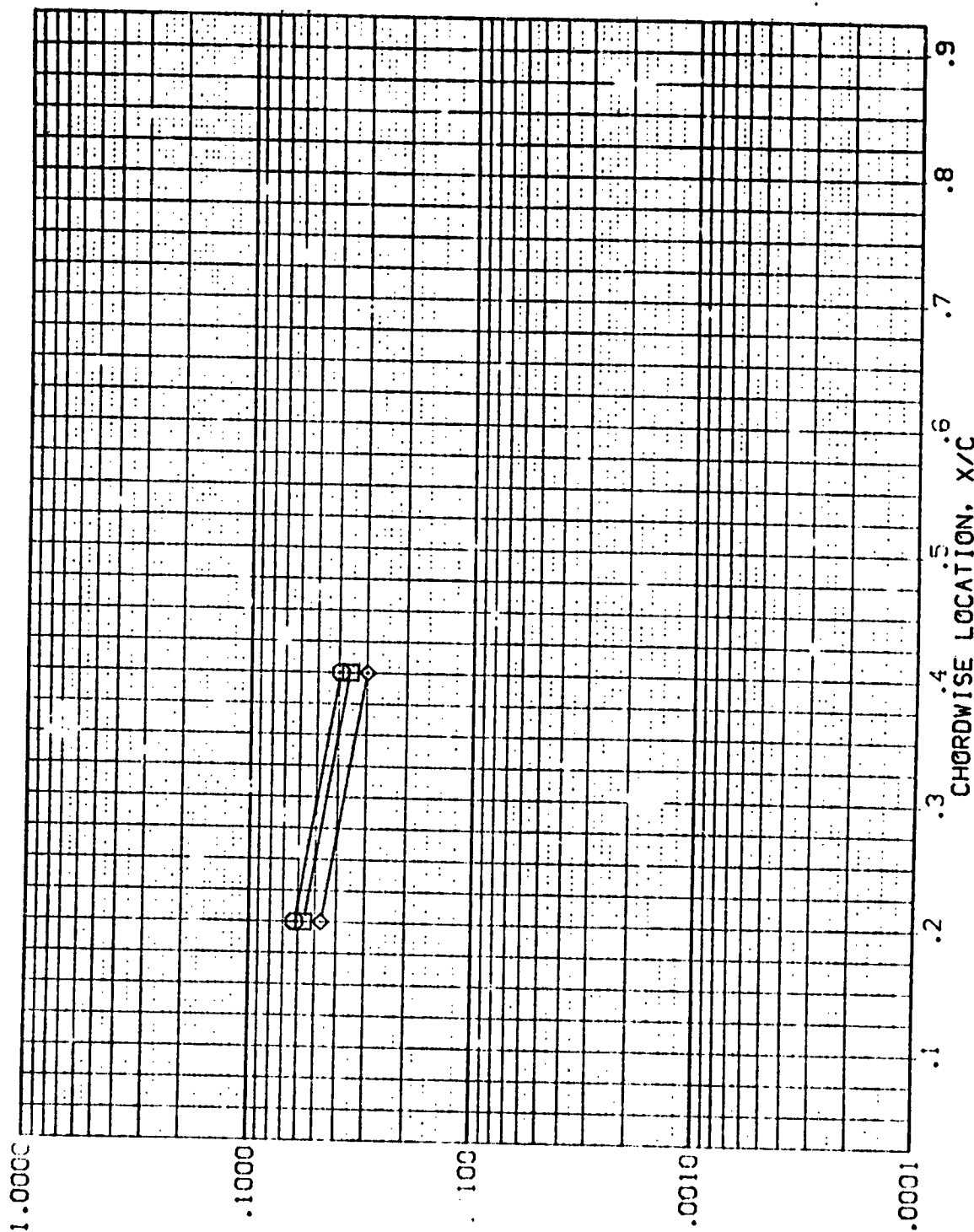


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F02)

SYMBOL	HA/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.219	ALPHA 00.000
□	.900			BETA 1.000
◇	.000			

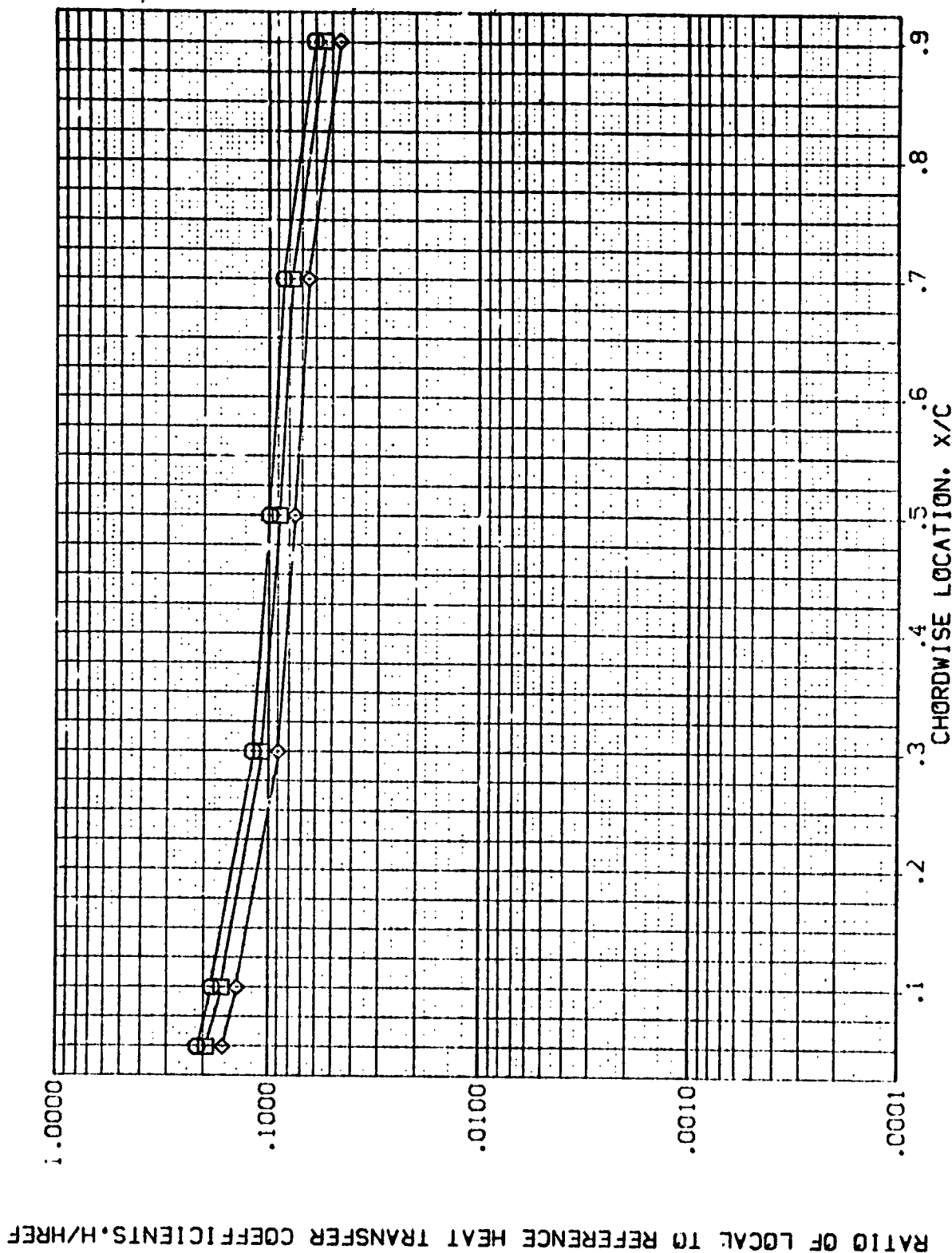


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

(REV F02)

AMES 3.5-195 IH28 0:11 WING LOWER SURFACE

SYMBOL

HAW/H
.850
.900
1.000

2Y/B
.600

MACH
5.219

PARAMETRIC VALUES

30.000

BETA

1.000

ALPHA

RN/L

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

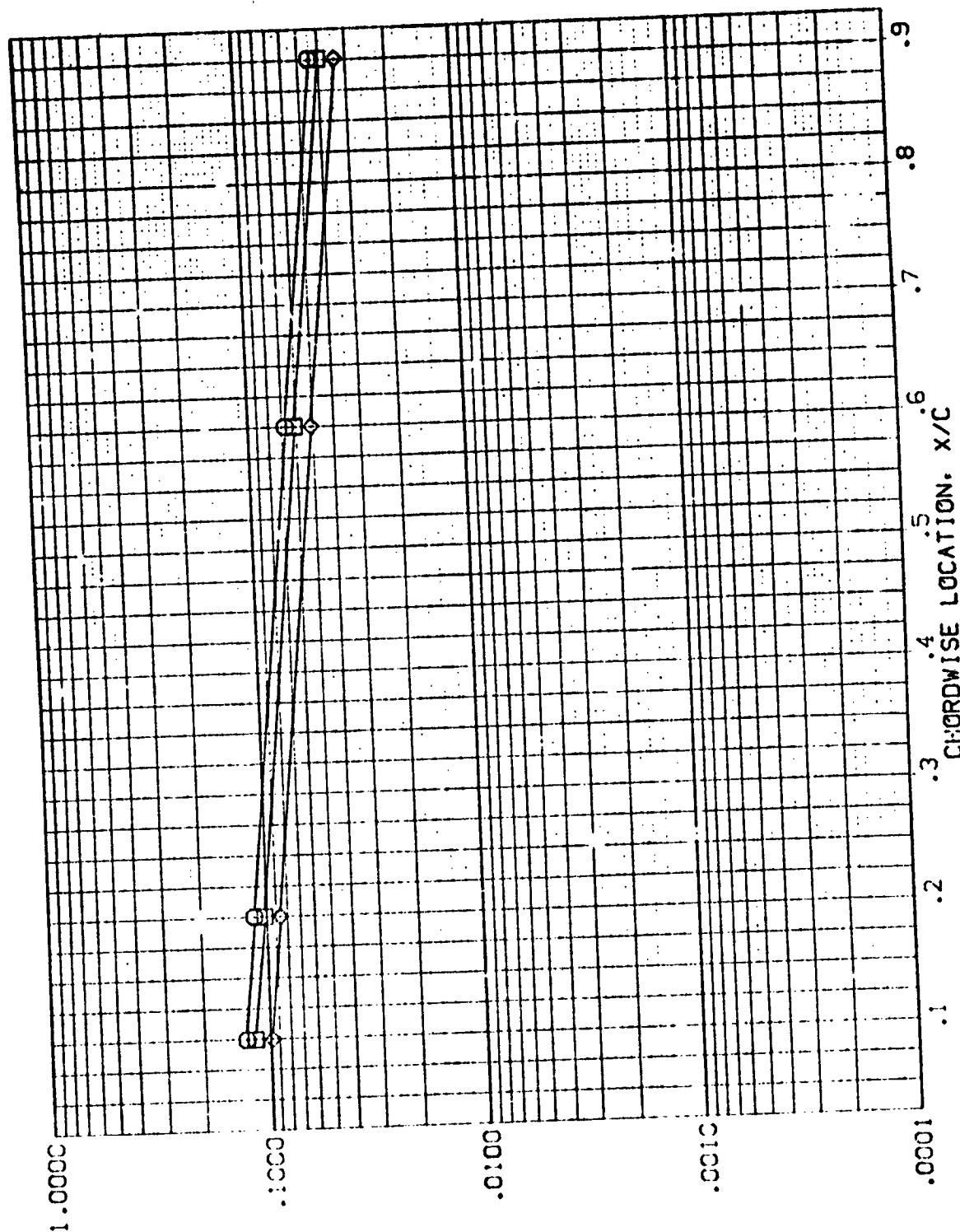


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVFO2)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RV/L	BETA RV/L
□	.850	.800	5.219	30.000	.000
◇	.900			1.000	
◇	1.000				

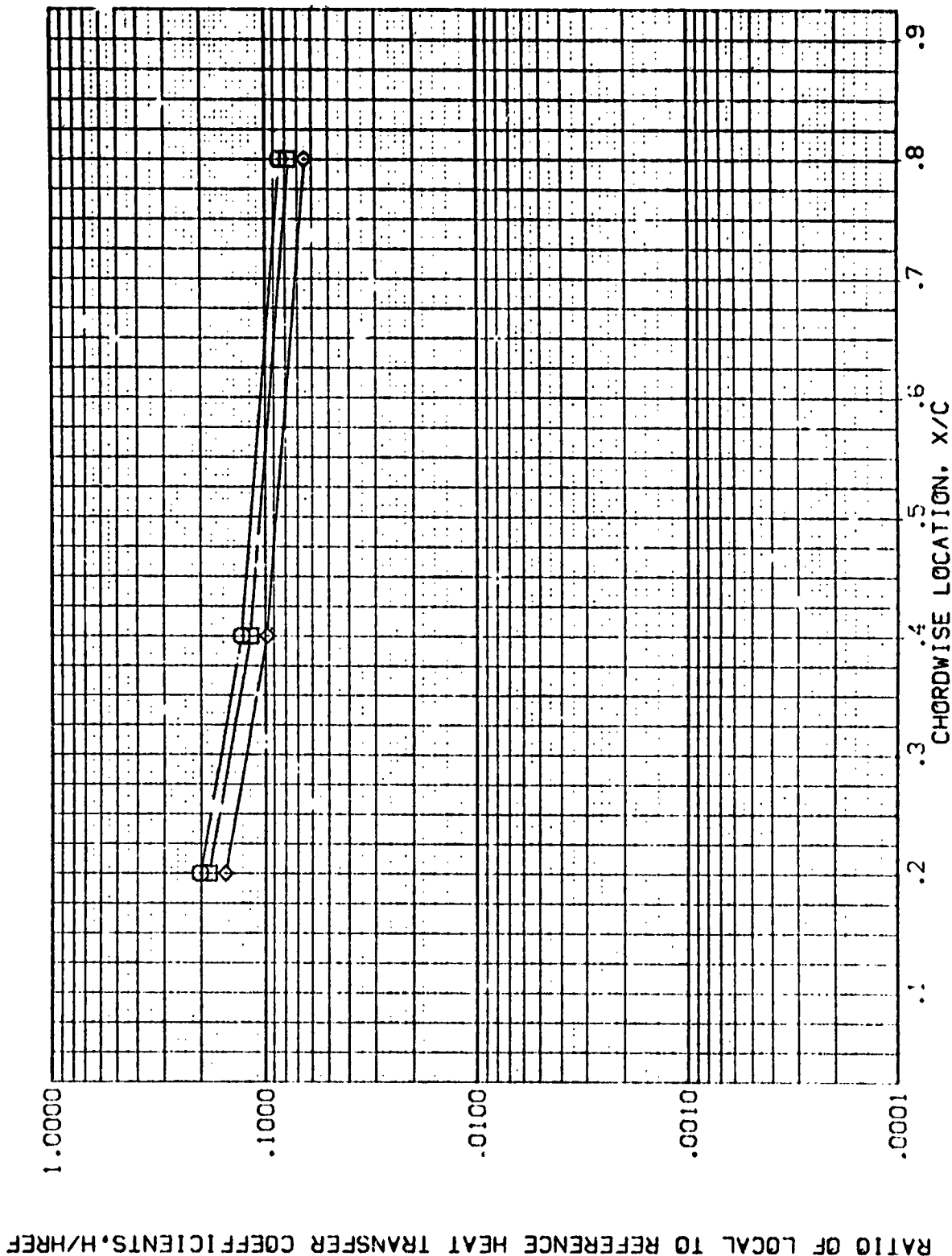


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

SYMBOL
◇
□
○

HA/WHT 2Y/B MACH
-850 .400 5.220
-900
1.000

PARAMETRIC VALUES
ALPHA 60.000 BETA .000
RN/L 1.000

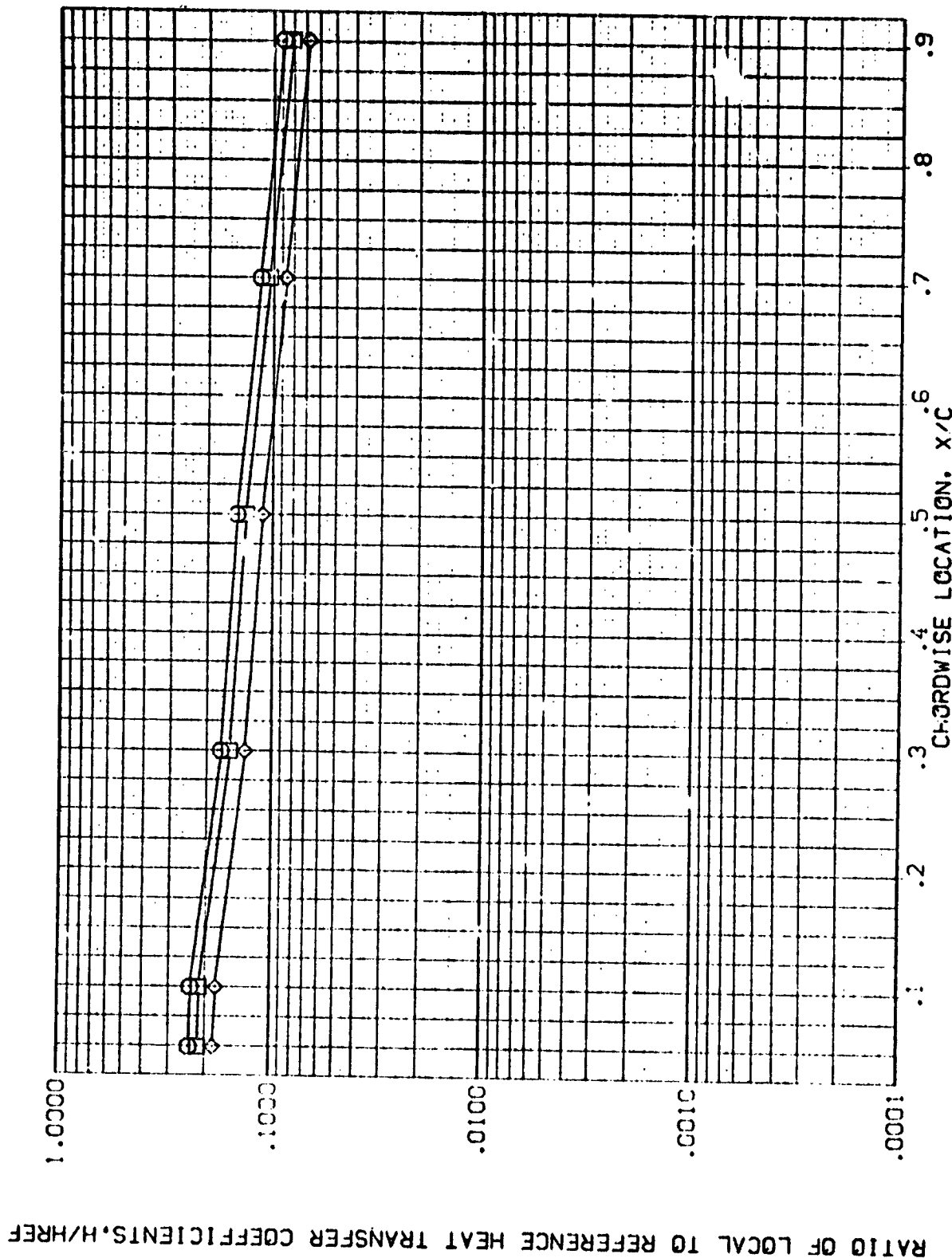


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REV F03)

SYMBOL
 □
 ◇
 1.000

WING/H
 .850
 .900
 1.000

2Y/B
 .600

MACH
 5.220

PARAMETER VALUES
 ALPHA
 60.00
 RIN/L
 1.000

BETA
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

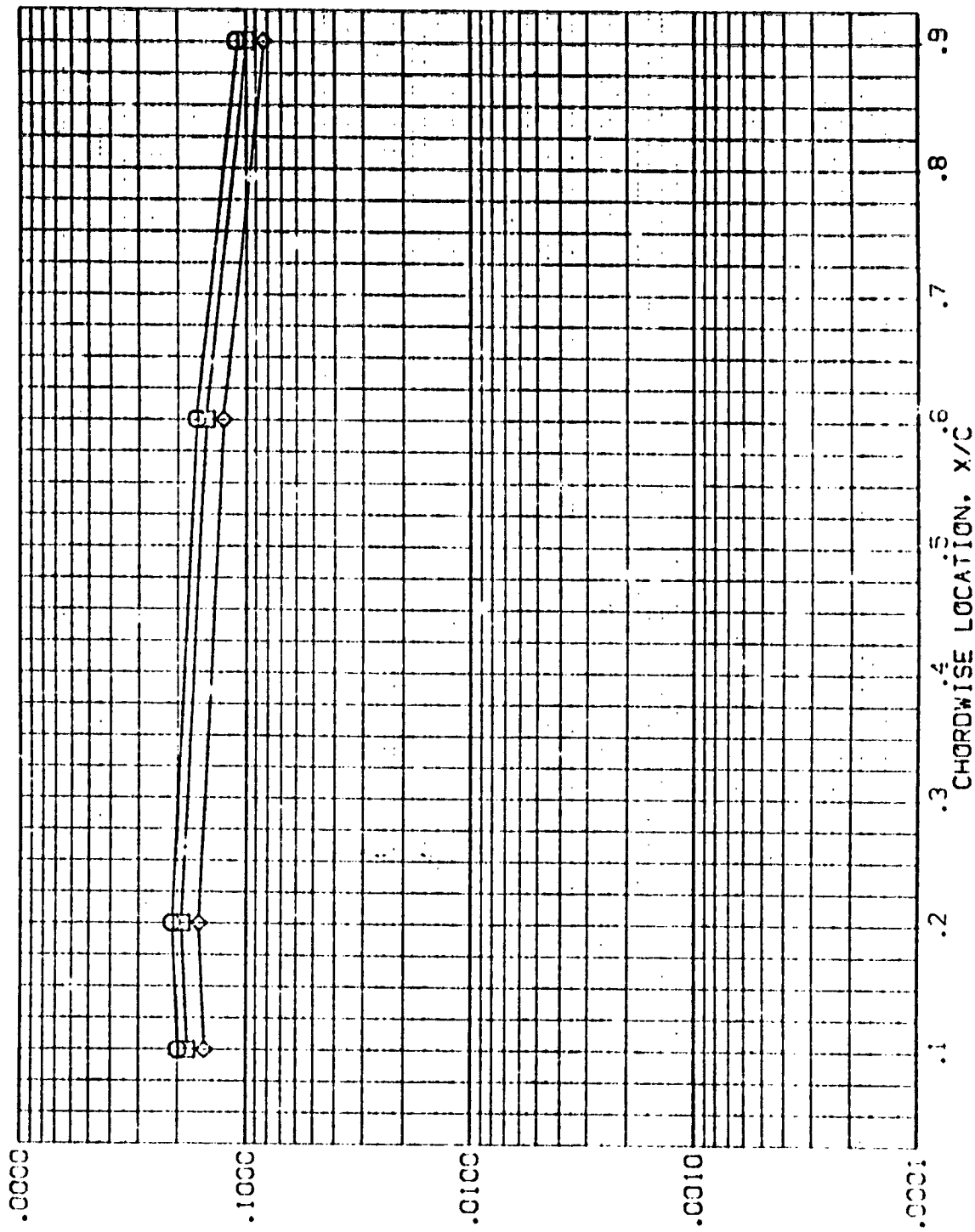


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AVES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F03)

SYMBOL	RAW/RT	2V/B	MACH	PARAMETRIC VALUES
◇	.850	.800	5.220	ALPHA 60.000 BETA .000
◇	.900			RN/L 1.000
◇	1.000			

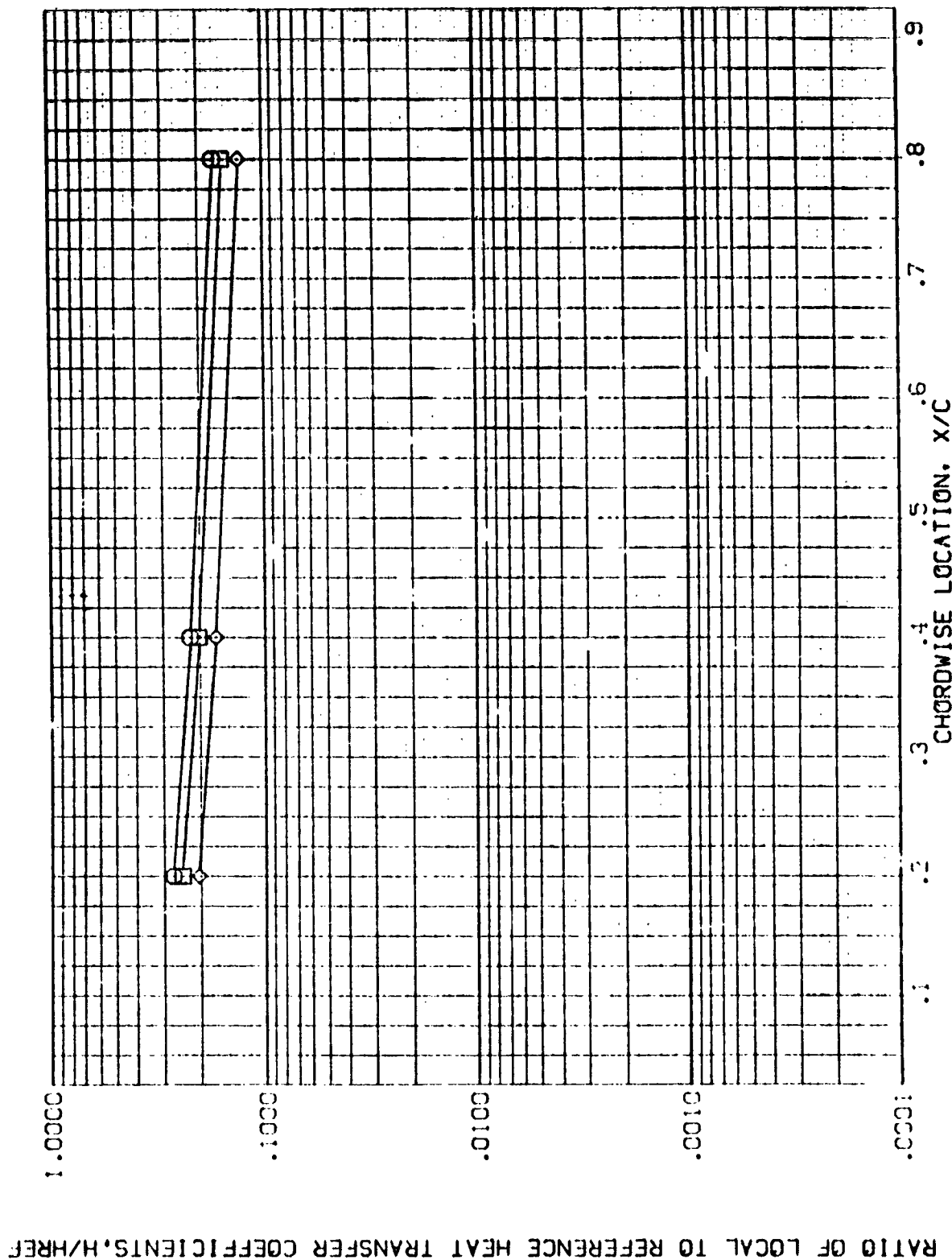


FIG. 20 LEFT WING LOWER SURFACE, CRBITER IN PRESENCE OF TANK

AVES 3.5-195 IH28 01+T1 WING LOWER SURFACE

AMES 3.5-195 1426 01+T1 WING LOWER SURFACE (REVFO4)

SYMBOL	WING/WT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.219	ALPHA 90.000 BETA .000
◇	.900			RV/L 1.000
◇	1.000			

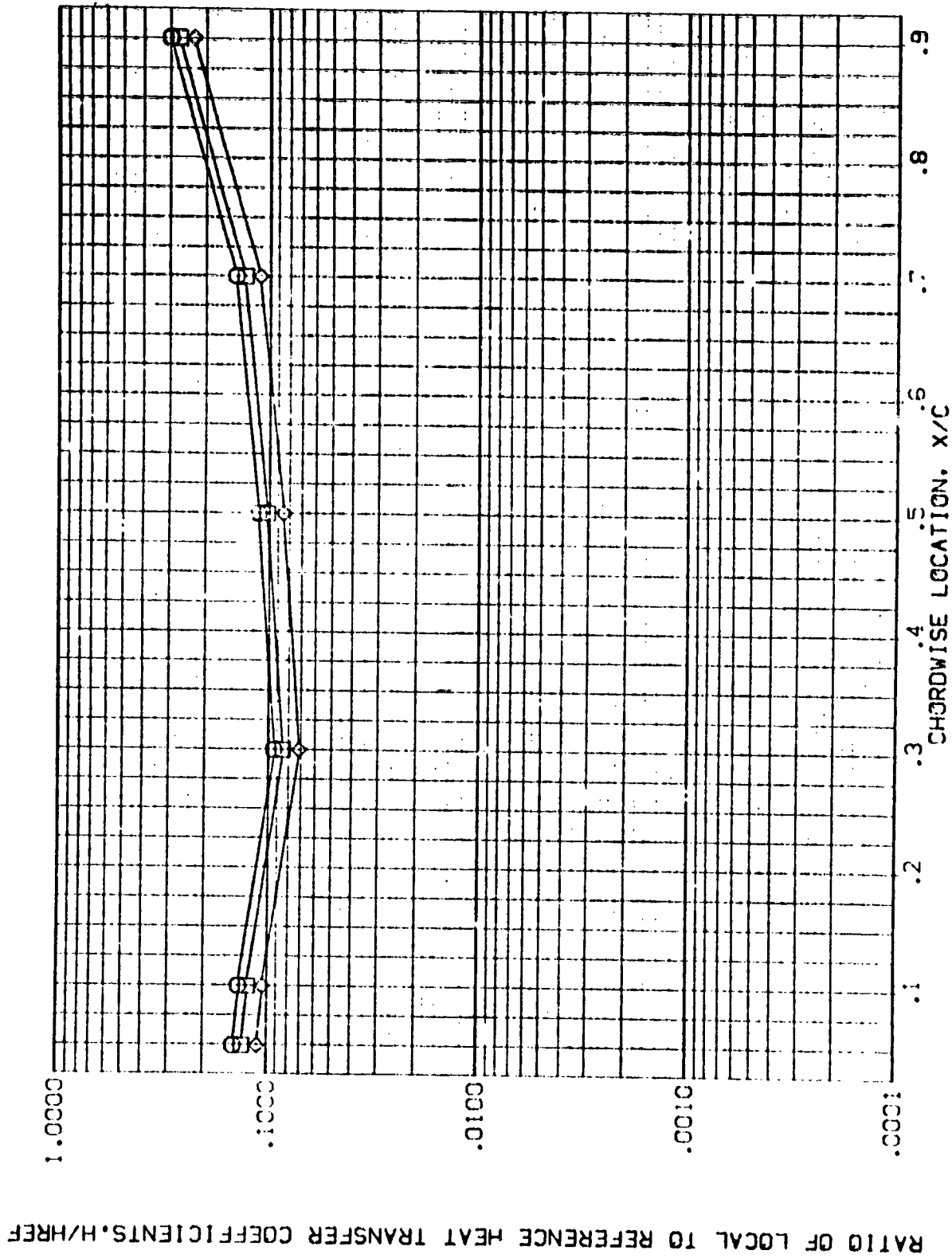


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

SYMBOL	HAIR/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.950	.600	5.219	ALPHA
□	.900			93.000
◇	1.000			BETA
				1.000

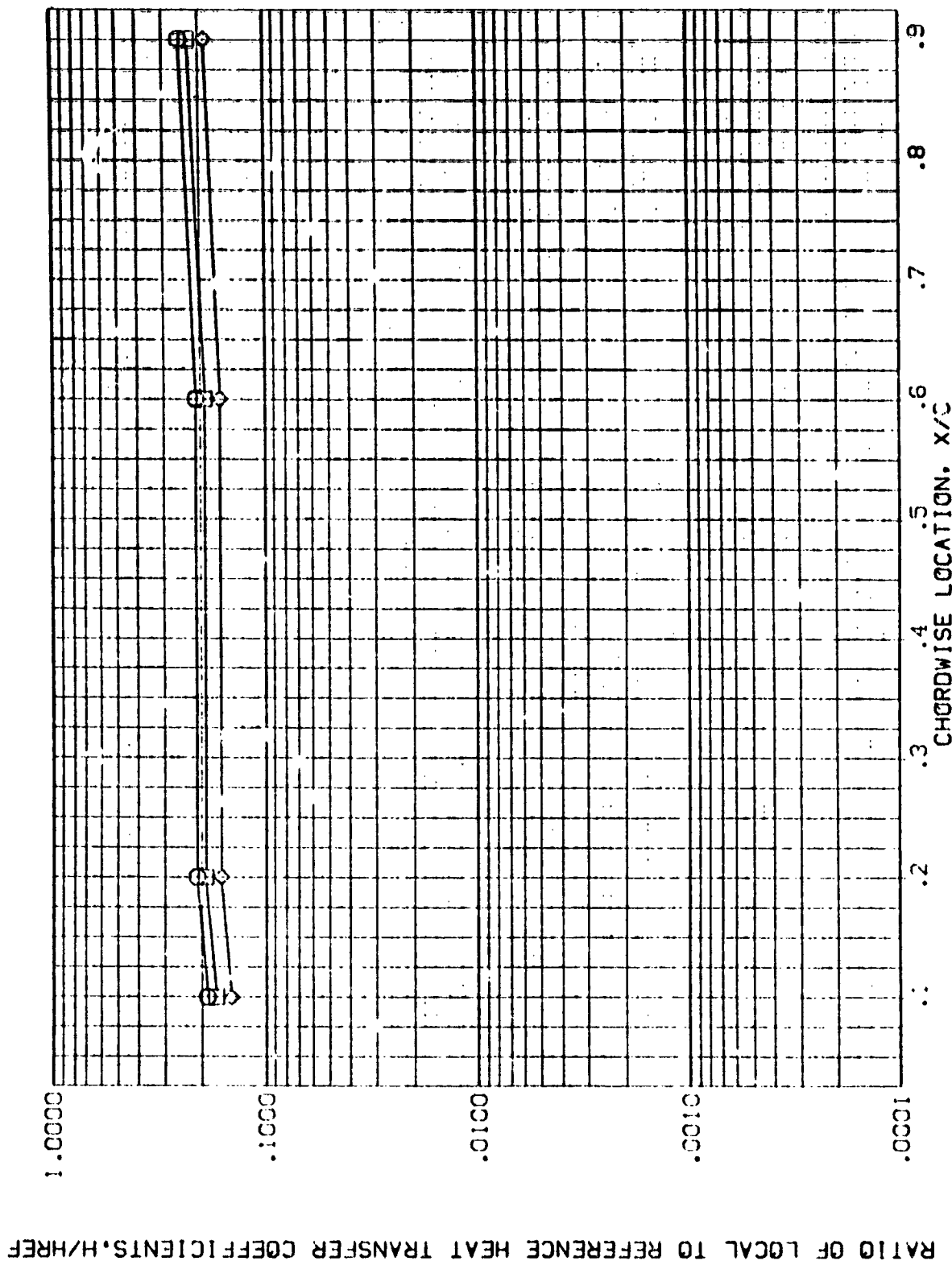


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING LOWER SURFACE (REV F04)

SYMBOL	HAW/HT	ZY/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
				RN/L	
□	.850	.800	5.219	90.000	.000
◇	.900			1.000	
◇	1.000				

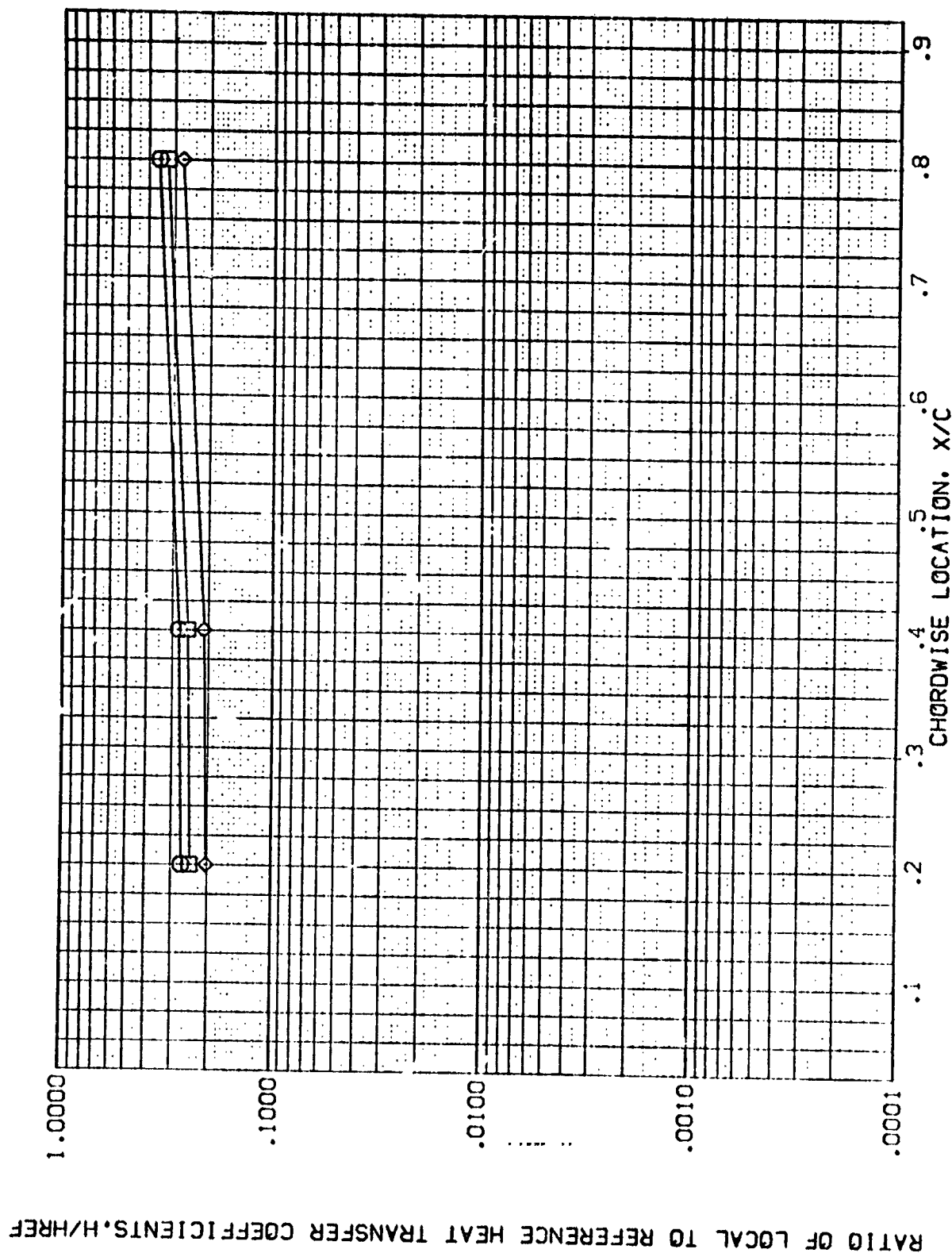


FIG. 20 LEFT WING LOWER SURFACE, CRBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REV F05)

SYMBOL HAW/HT 2Y/B MACH
 ○ .850
 □ .900
 ◇ 1.000

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L 1.000

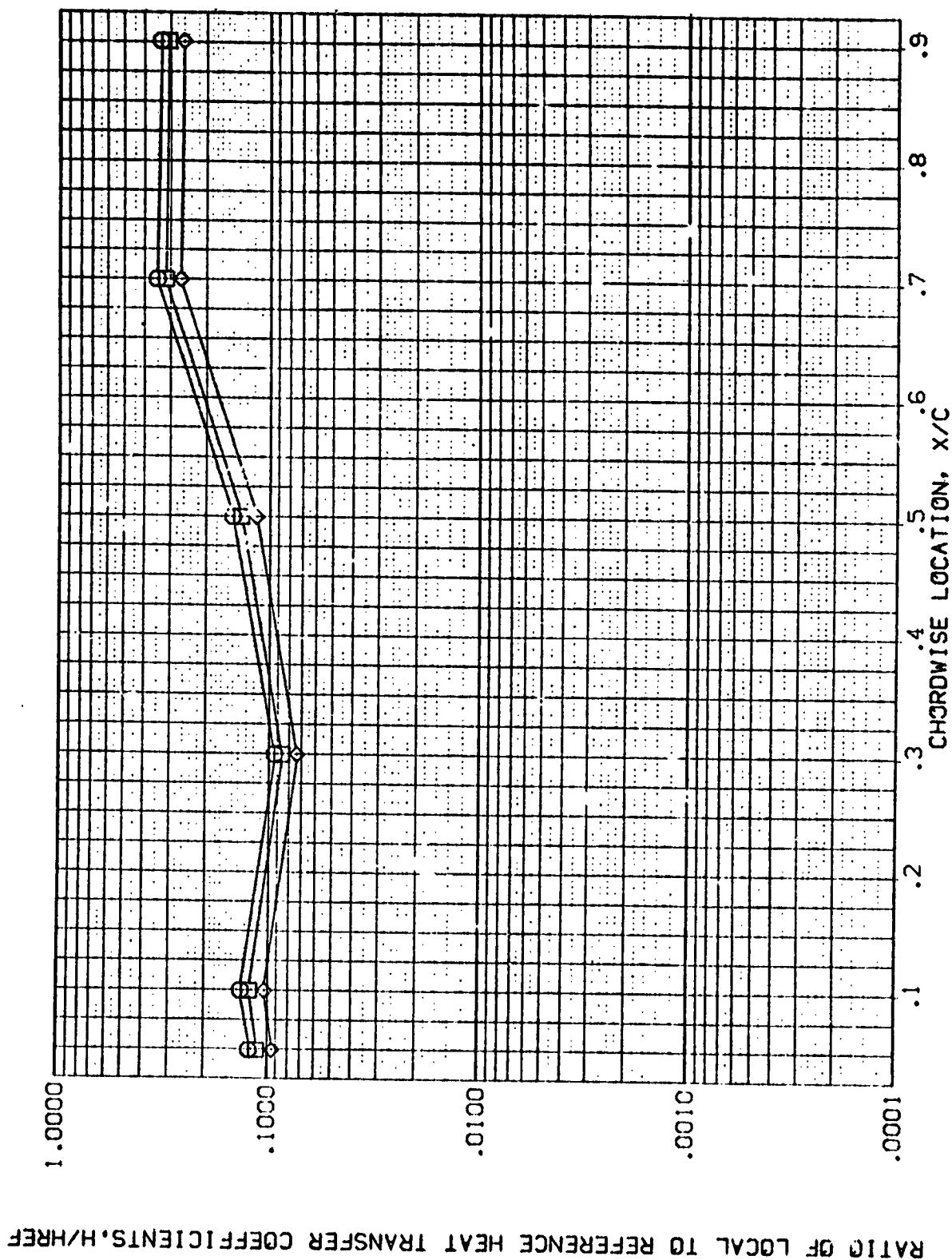


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVFO5)

SYMBOL	MAV/HT	2Y/B	MACH	ALPHA	PARAMETRIC VALUES	BETA
□	.850	.600	5.220	RN/L	120.000	.000
◇	.900				1.000	
◇	1.000					

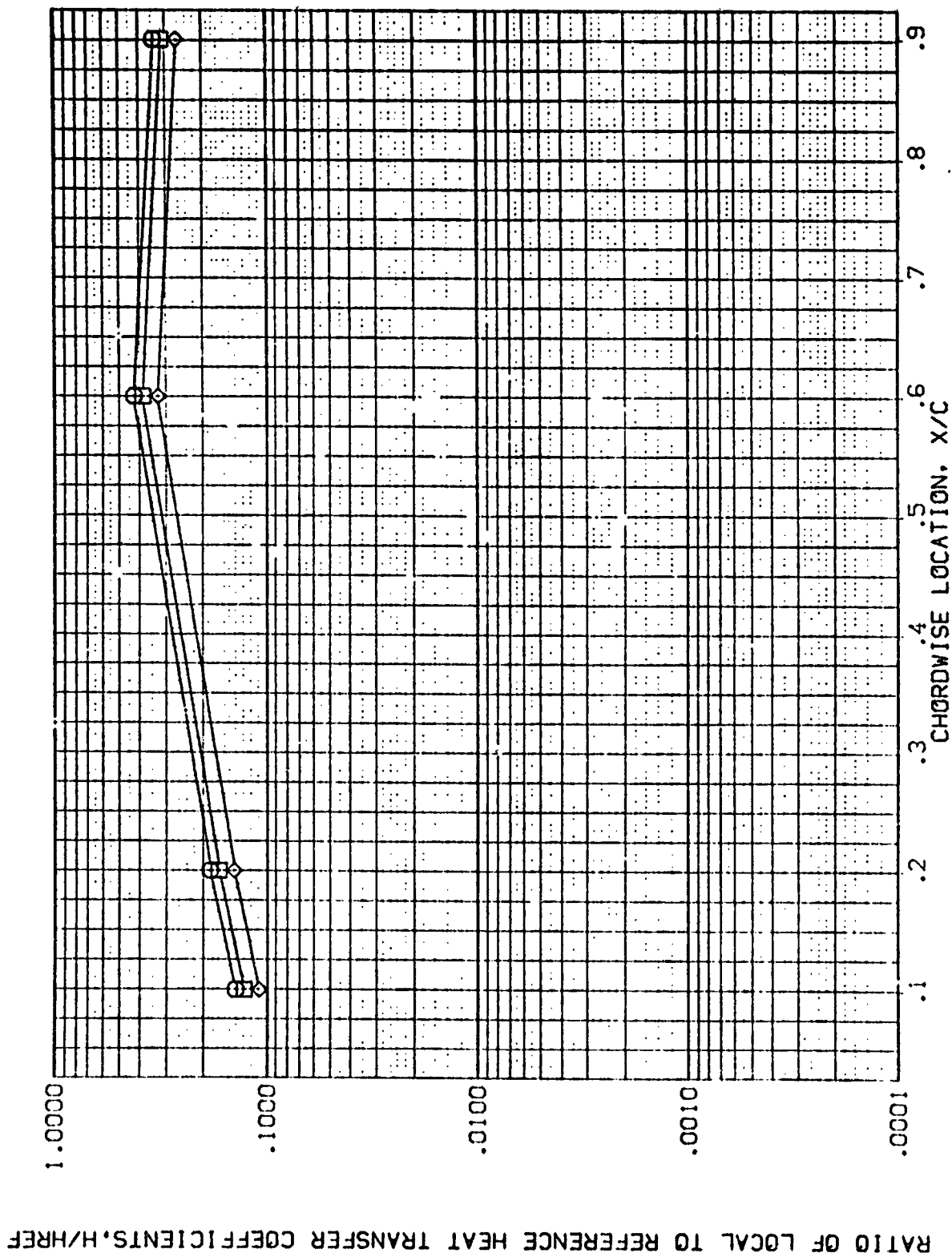


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F05)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
○	.850	.800	5.220	120.000	.000
□	.900			1.000	
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

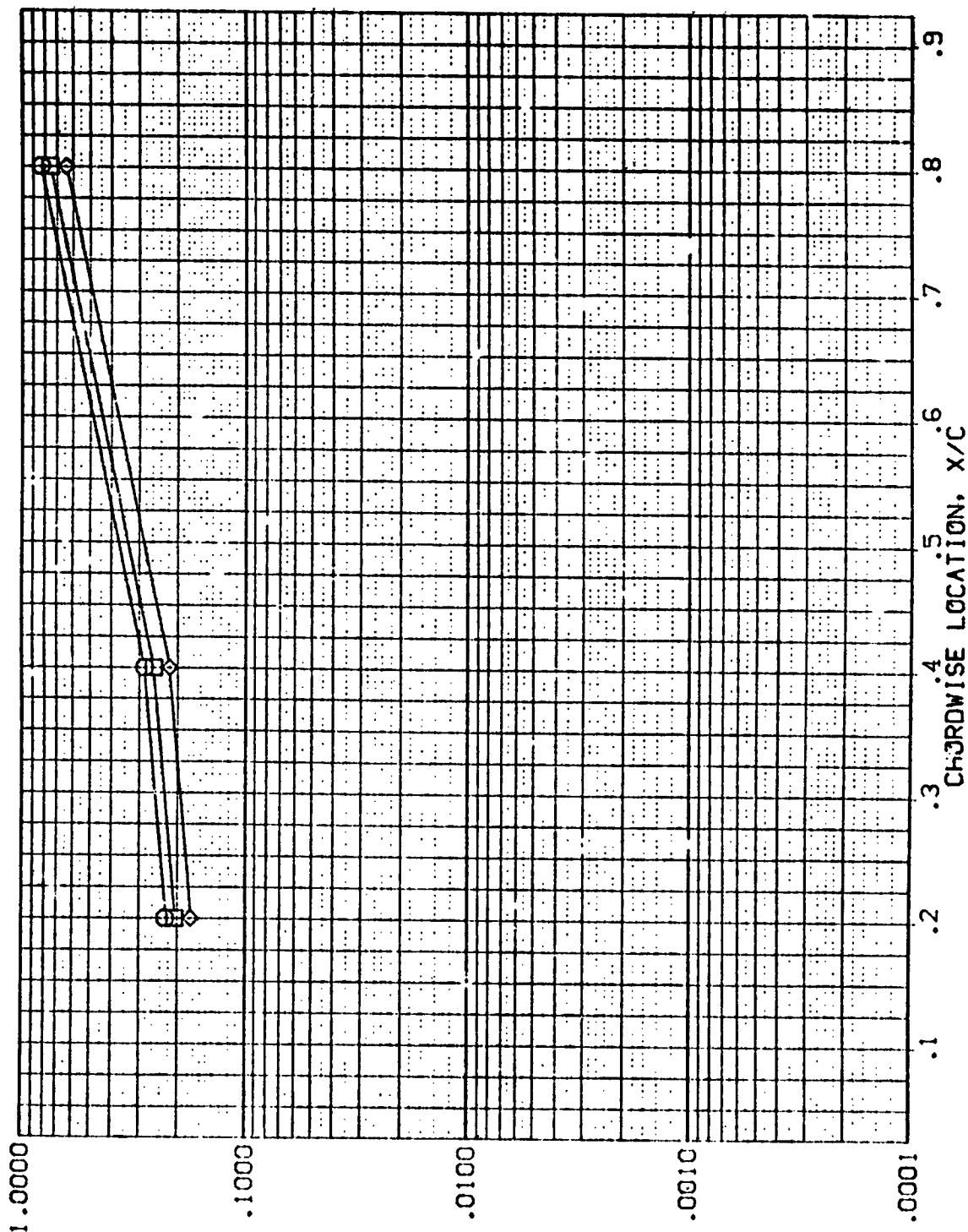


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F06)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES
□	.850	.400	5.220	ALPHA
◇	.900			RN/L
	1.000			BETA
				.000

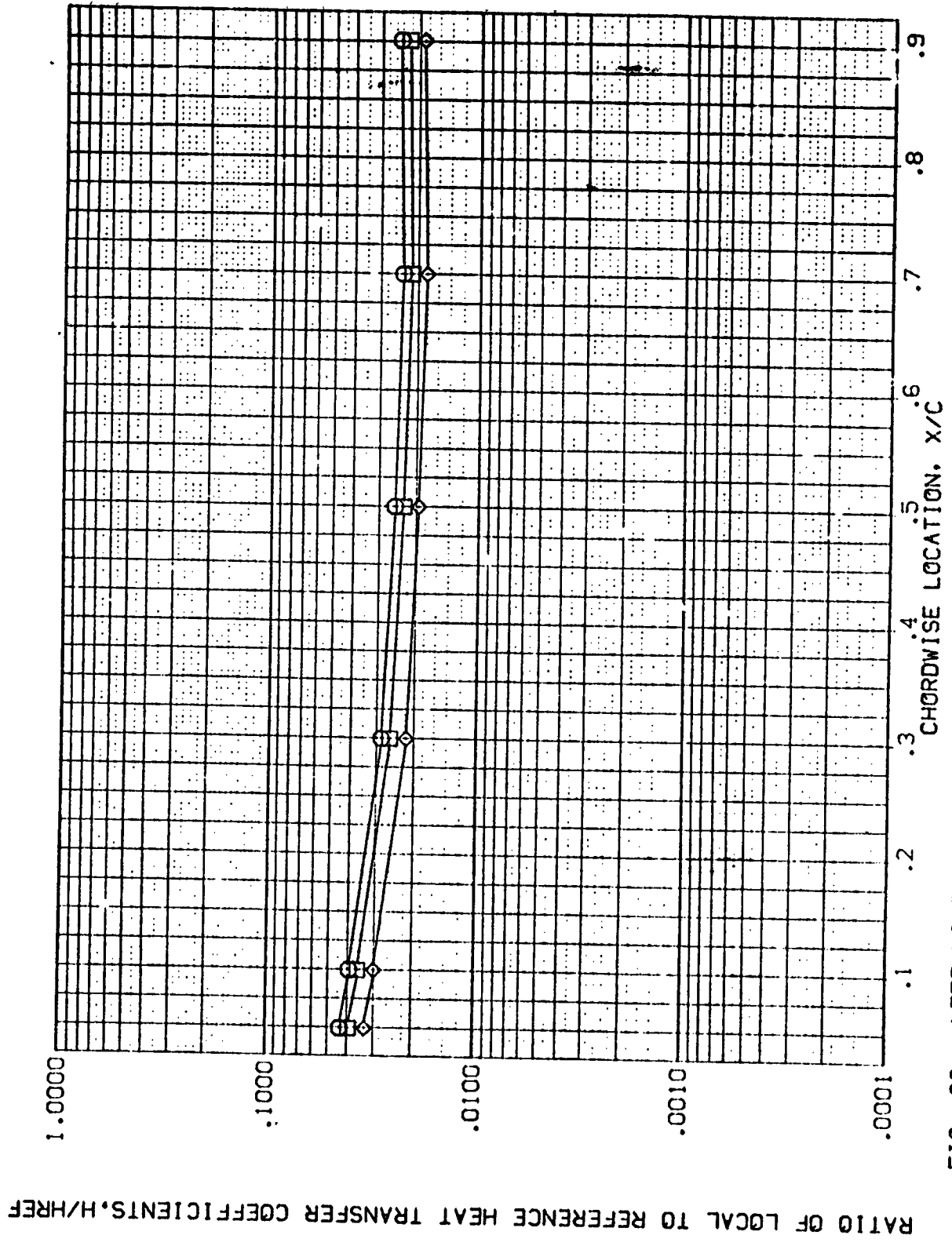


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F06)

SYMBOL	HAIR/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.600	5.220	ALPHA -120.000
◇	.900			BETA 1.000
◇	1.000			

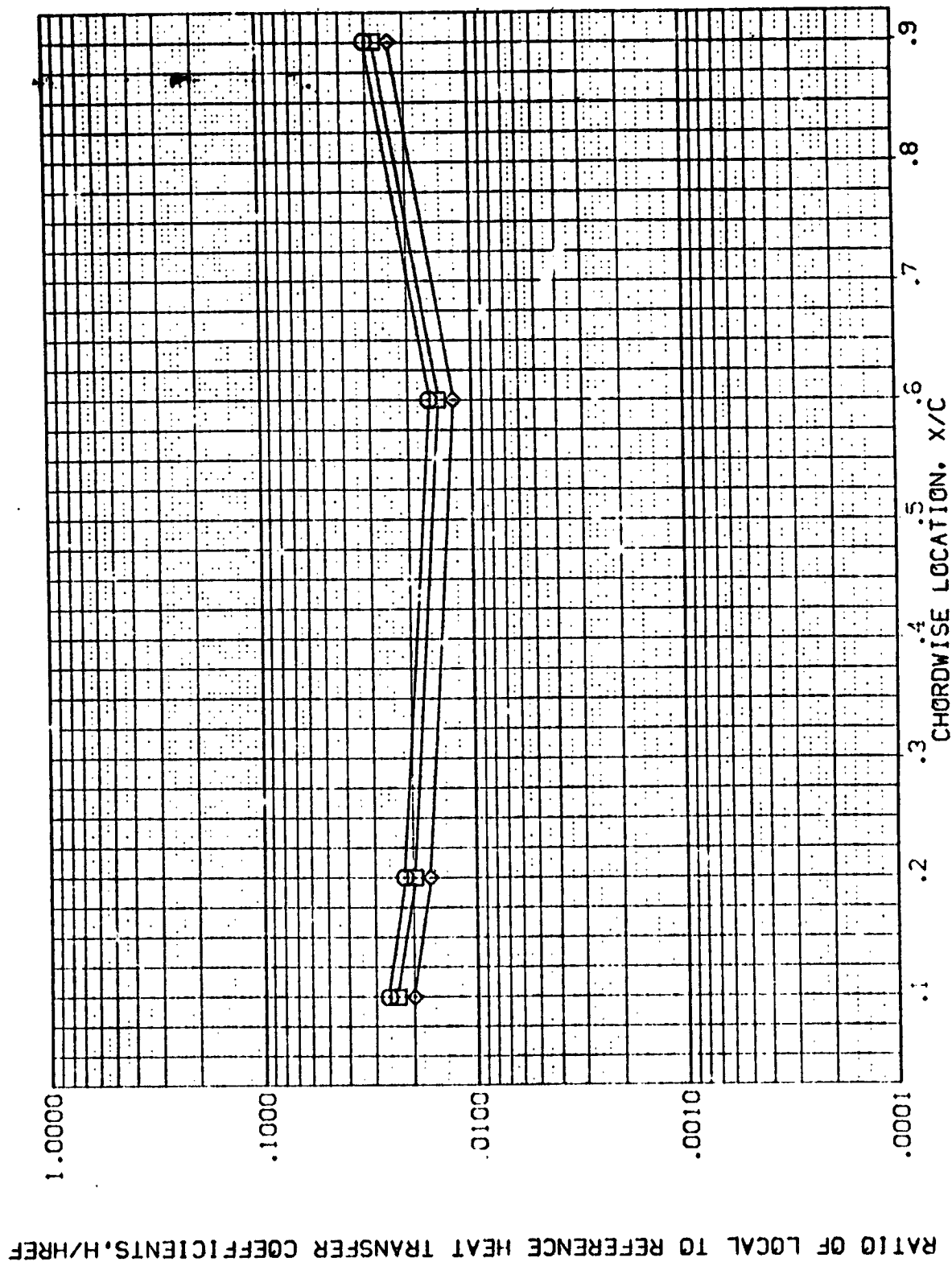


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

ANES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REVFO6)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
				RN/L	
□	.850	.800	5.220	-120.000	1.000
◇	.900				
◇	1.000				

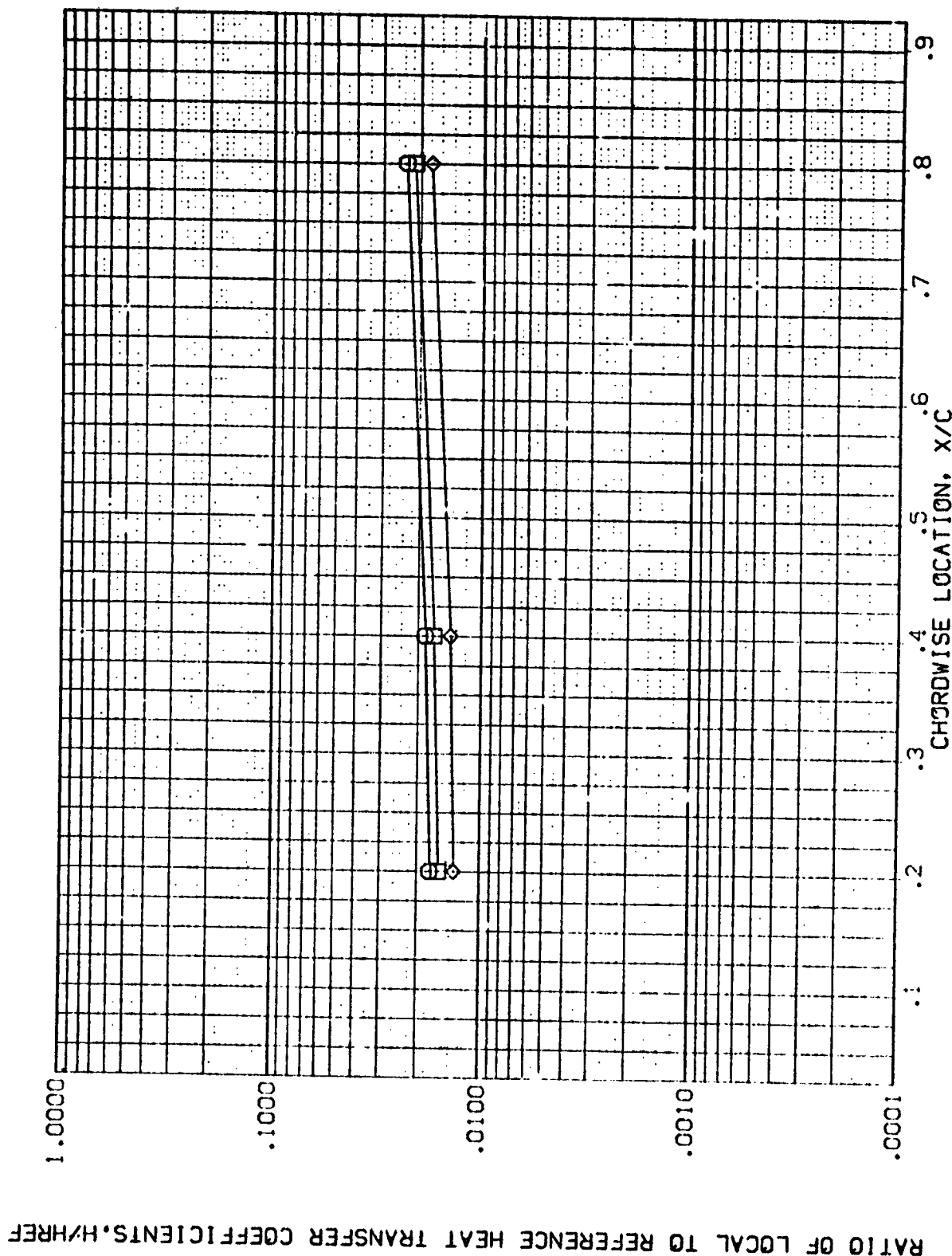


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F07)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
○	.850	.400	5.219	-90.000	1.000
□	.900				
◇	1.000				

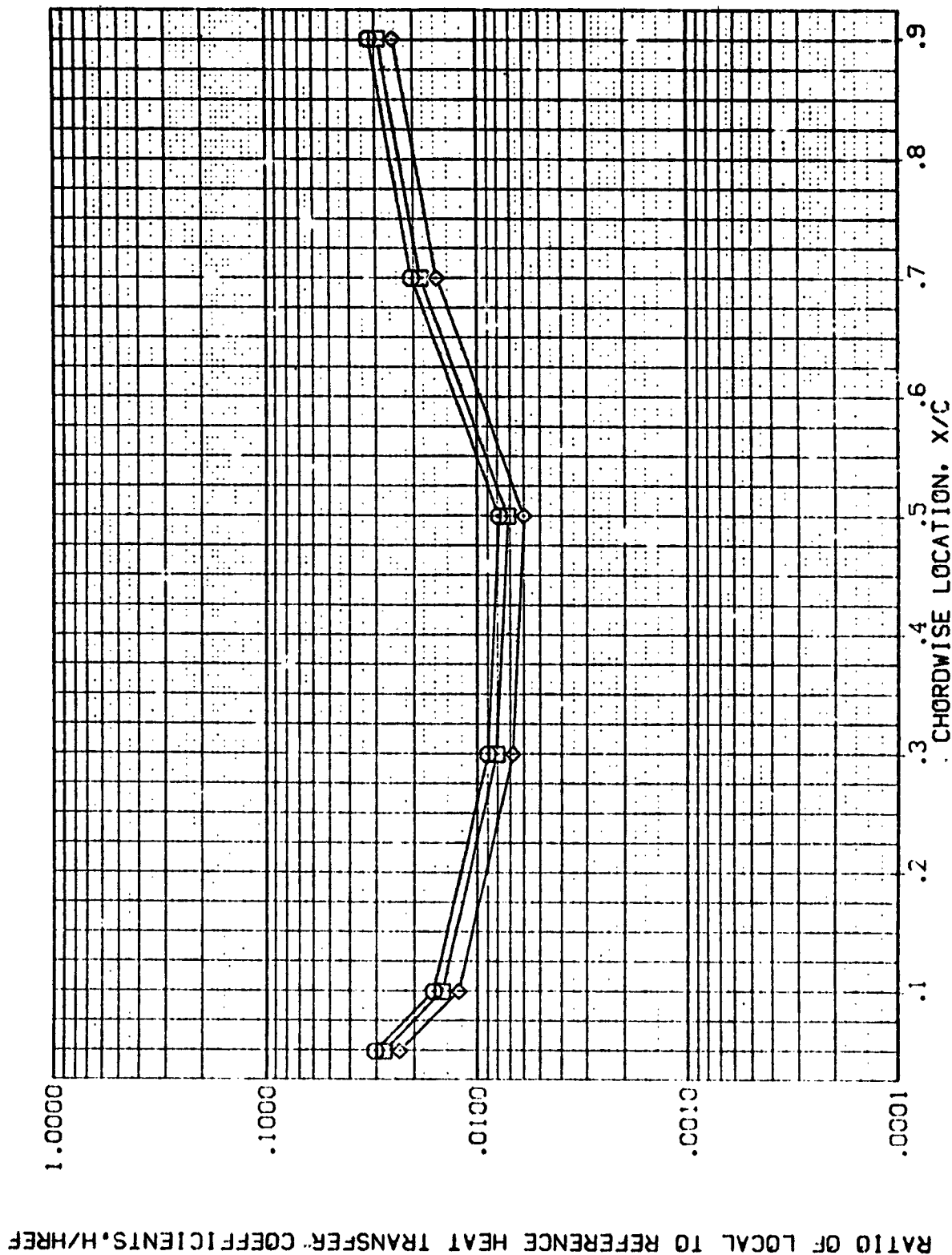


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F07)

SYMBOL	HAH/HT	2Y/B	MACH	PARAMETRIC VALUES	
	.850	.600	5.219	ALPHA	BETA
	.900			RN/L	
◇	1.000			1.000	.000

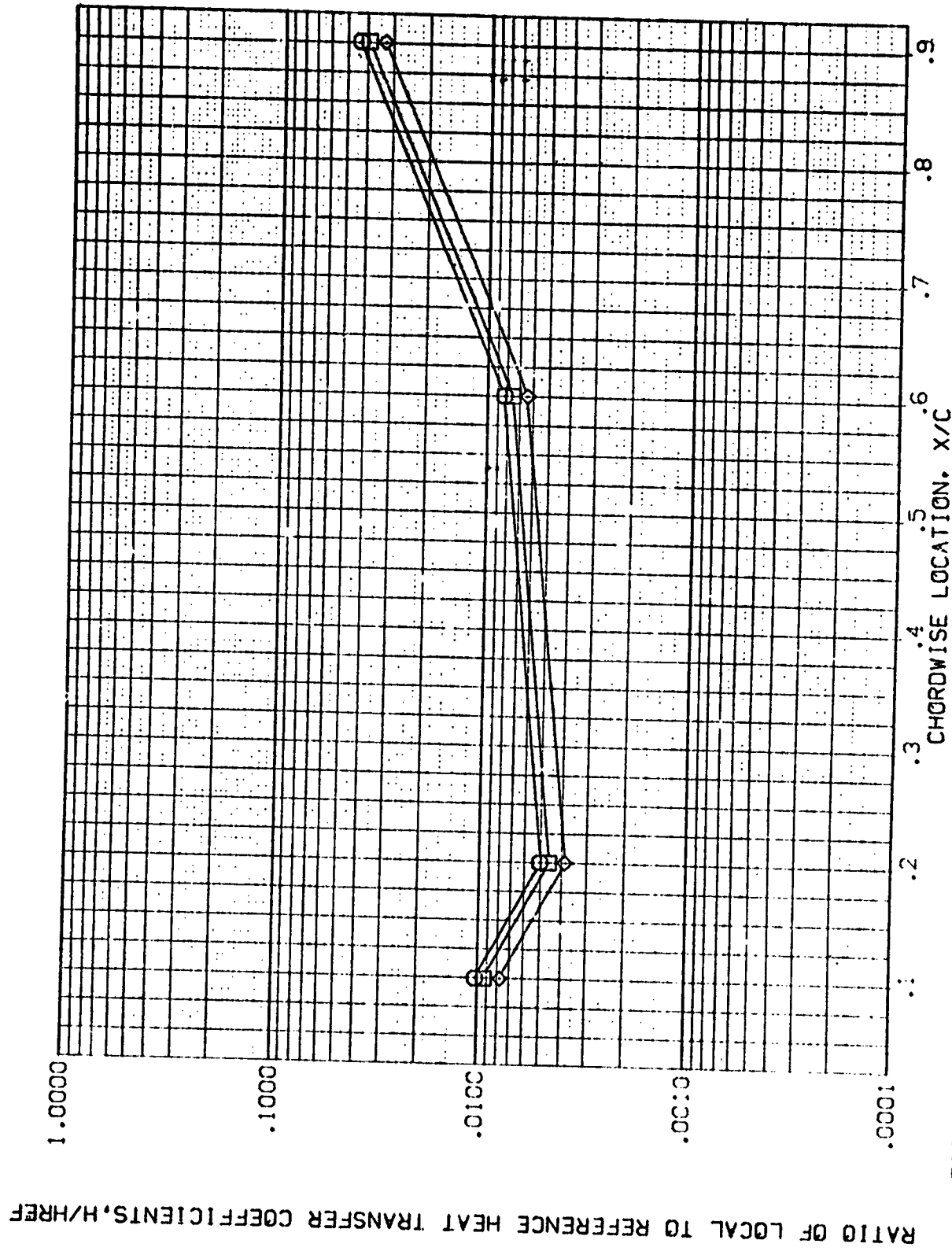


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F07)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.600	5.213	-90.000	.000
□	.900			1.000	
◇	1.000				

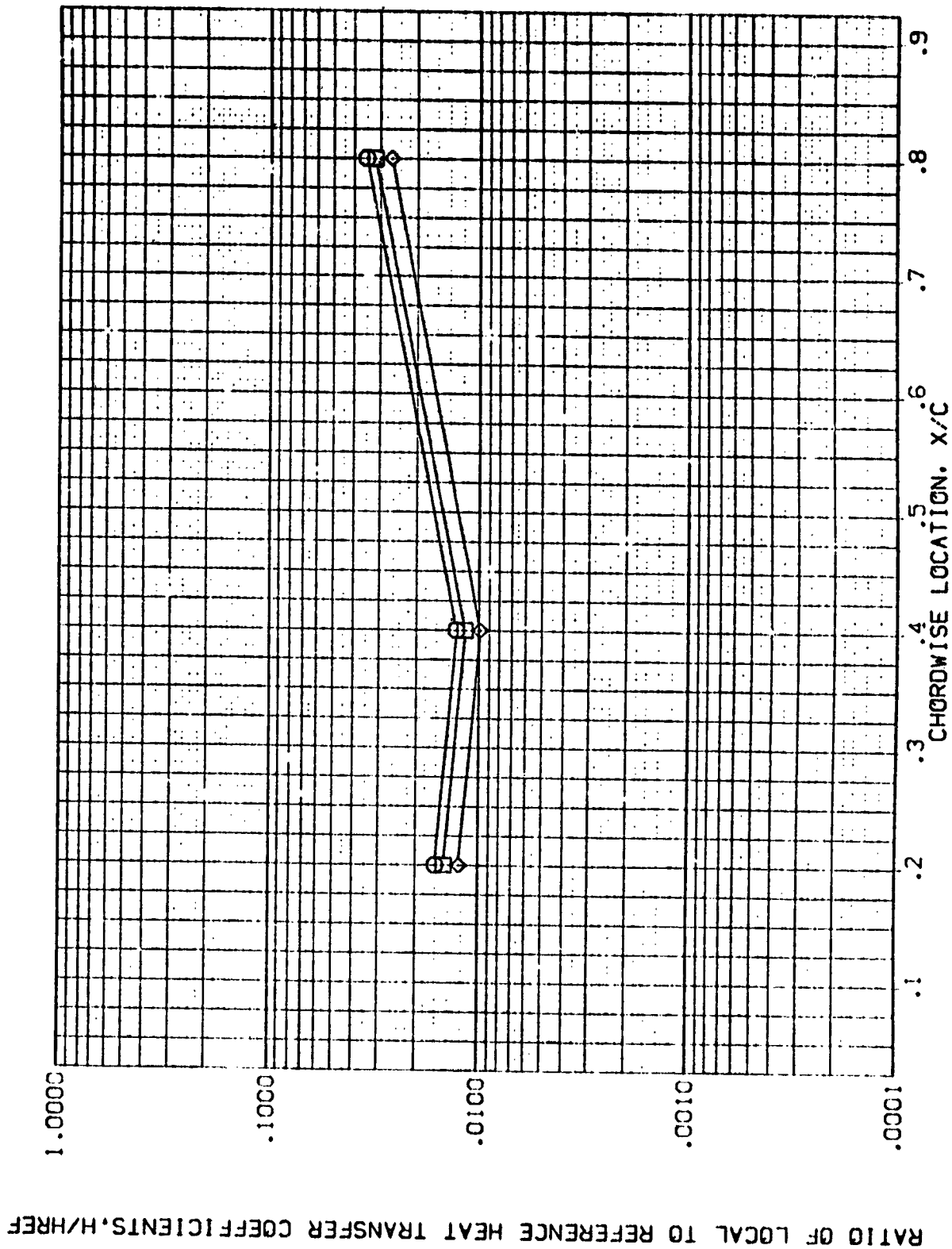


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F08)

SYMBOL	HAIR/HT	2V/B	MACH	PARAMETRIC VALUES	
□	.850	.403	5.220	ALPHA	BETA
◇	.900			RN/L	
	1.000				

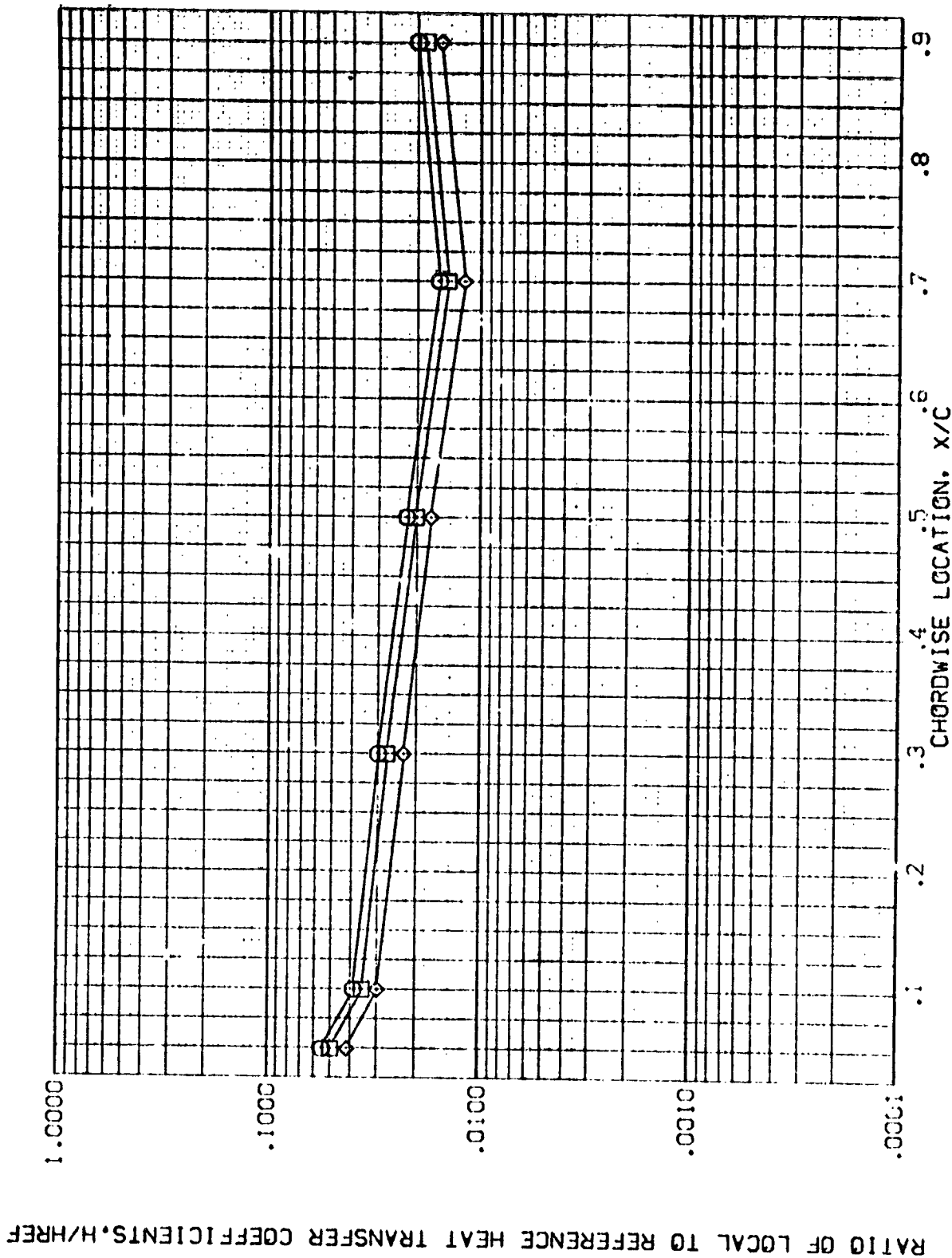


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+11 WING LOWER SURFACE

(REV F08)

SYMBOL

HAH/HHT

2v/B

CONFIDENTIAL

058'

05.

5.220

ALPWA

93

05.

077.0

RN: /L

000.000 BETA

000-03

000.

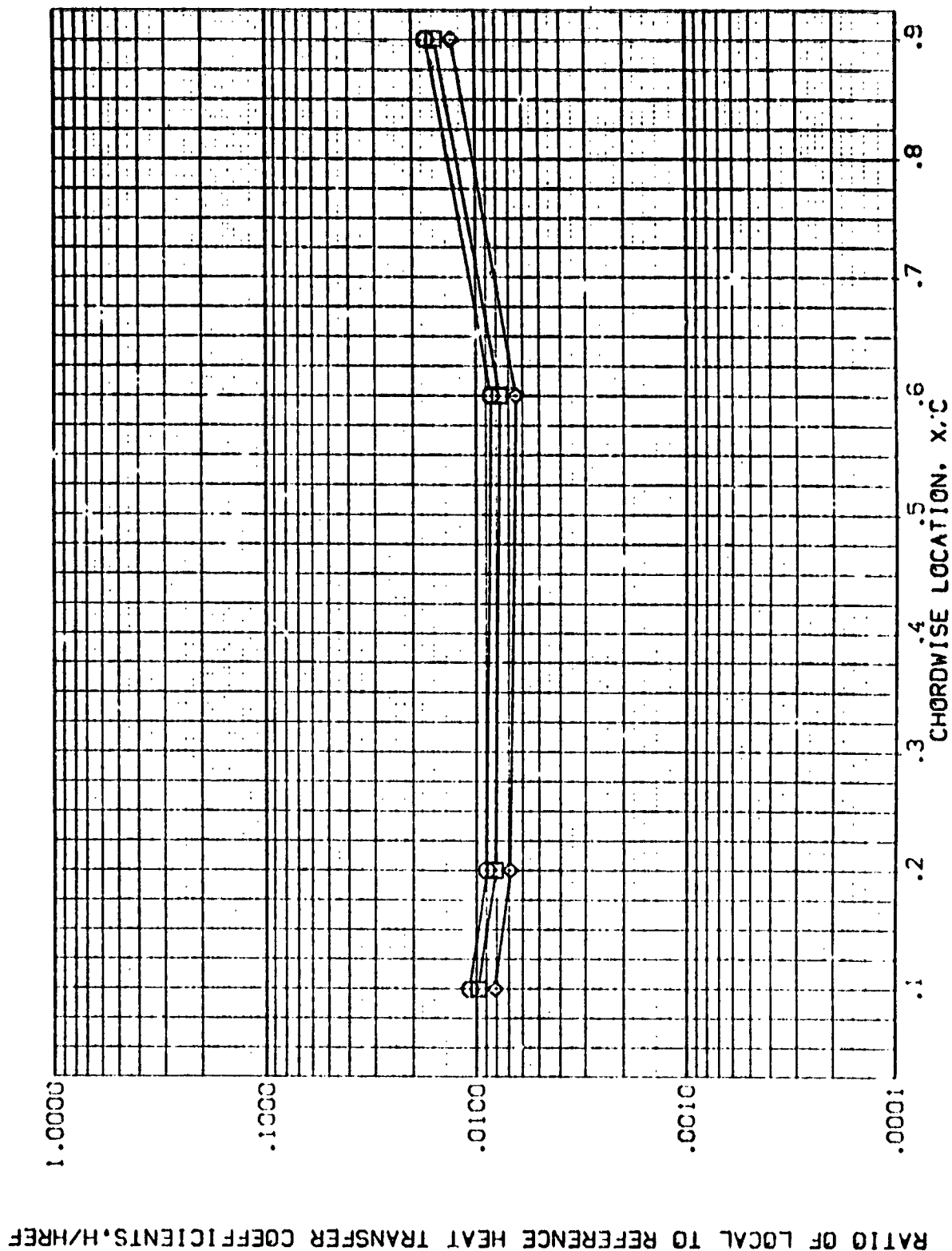


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

(REVFO8)

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE

PARAMETRIC VALUES
-60.000 BETA
1.000

ALPHA
RN/L

WAS/WT 2Y/B MACH
.850 .600 5.220
.900
1.000

SYMBOL
◇
□
◇

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

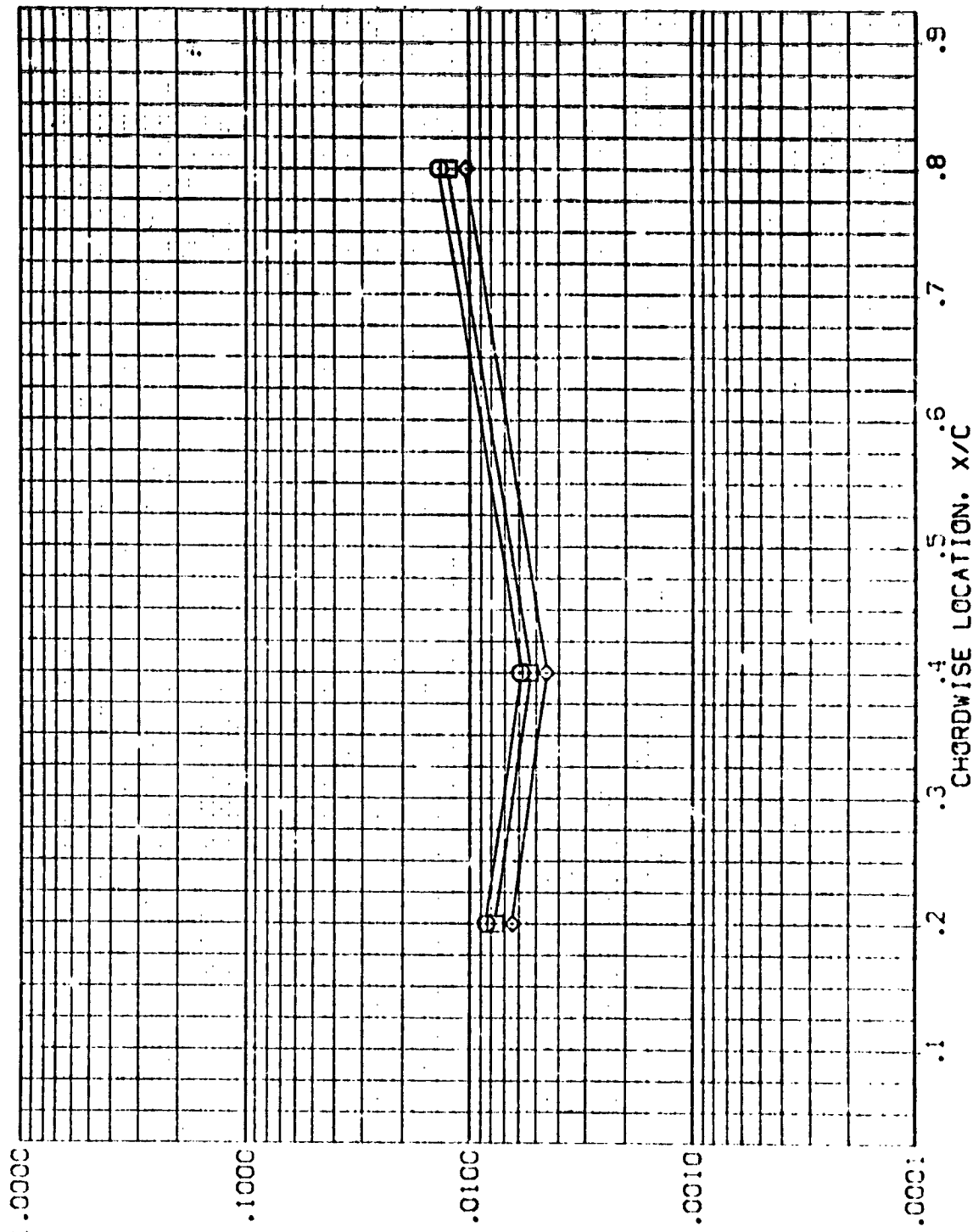


FIG. 20 LEFT WING LOWER SURFACE, ORBITER II, PRESENCE OF TANK

(REV 10/89)

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE

PARAMETRIC VALUES
-3L.C00 BETA .000
1.000

ALPHA
RN/L

MACH
5.220

2Y/B
.400

SYMBOL HAW/H
1.000
0.900
0.850

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

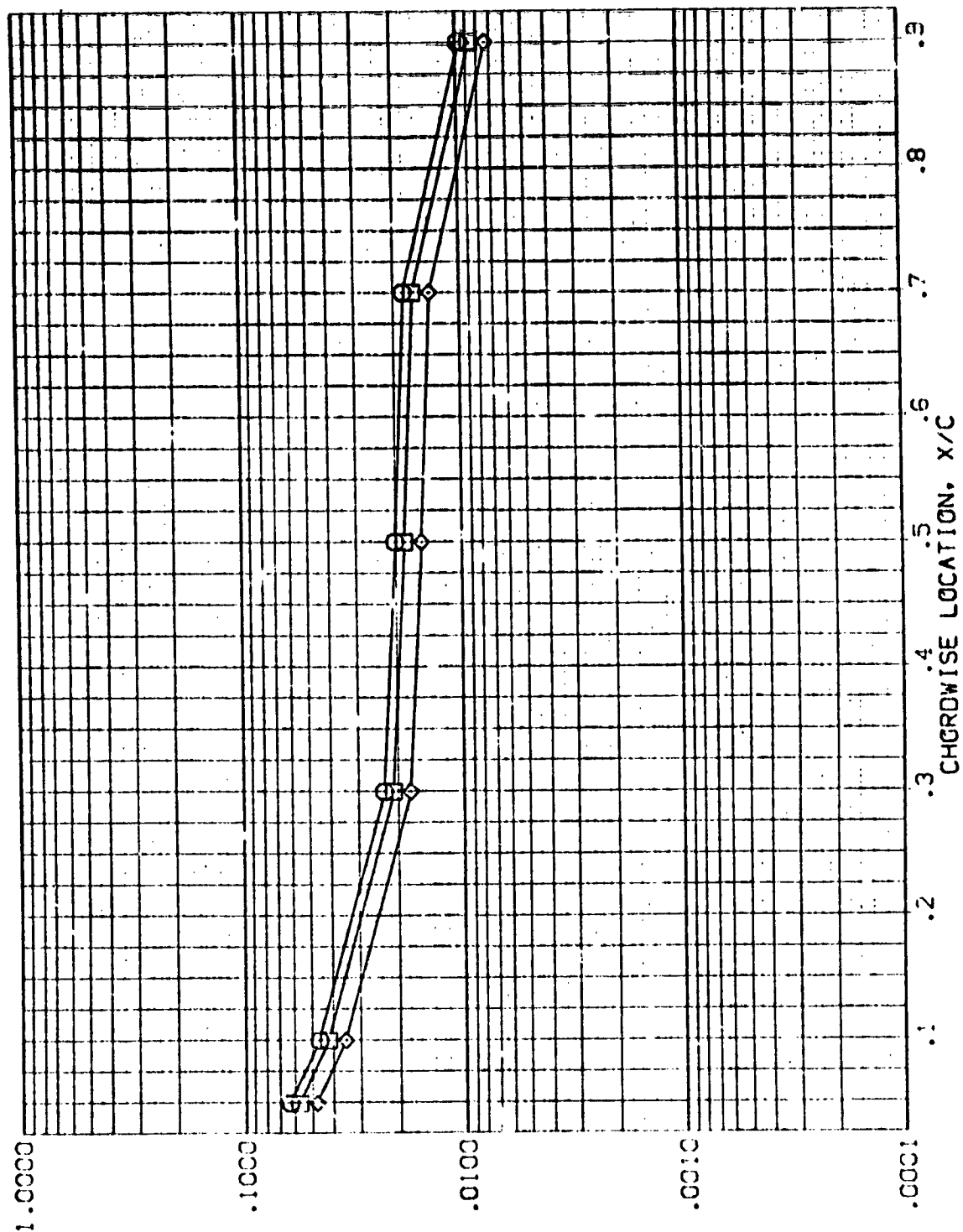


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F09)

SYMBOL	HAU/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.500	5.220	ALPHA
□	.900			RN/L
◇	1.000			BETA
				.000

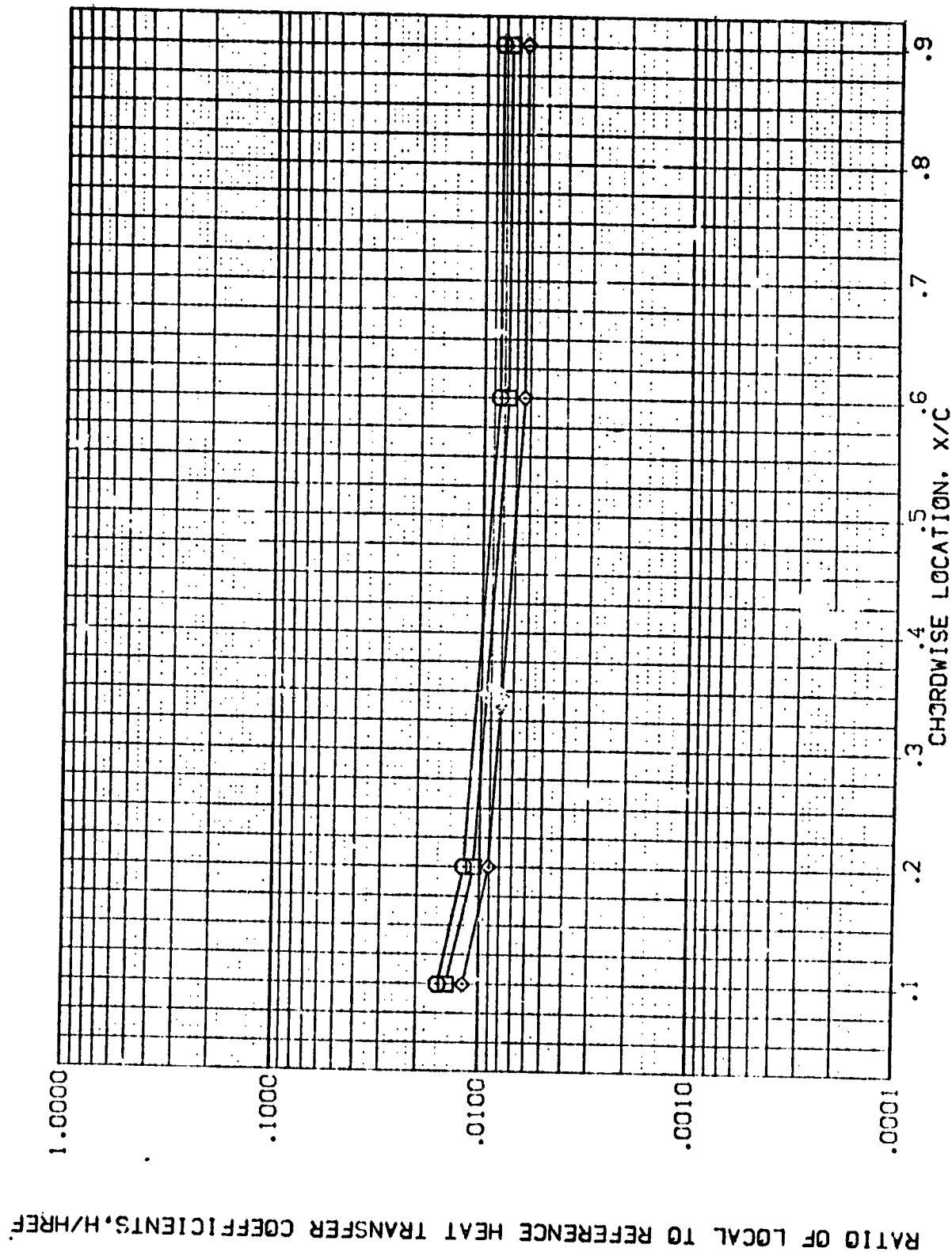


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F09)

SYMBOL	HAU/HT	2Y/B	MACH	PARAMETRIC VALUES	
◇	.850	.800	5.220	ALPHA	
□	.900			RN/L	
	1.000			BETA	
					.000

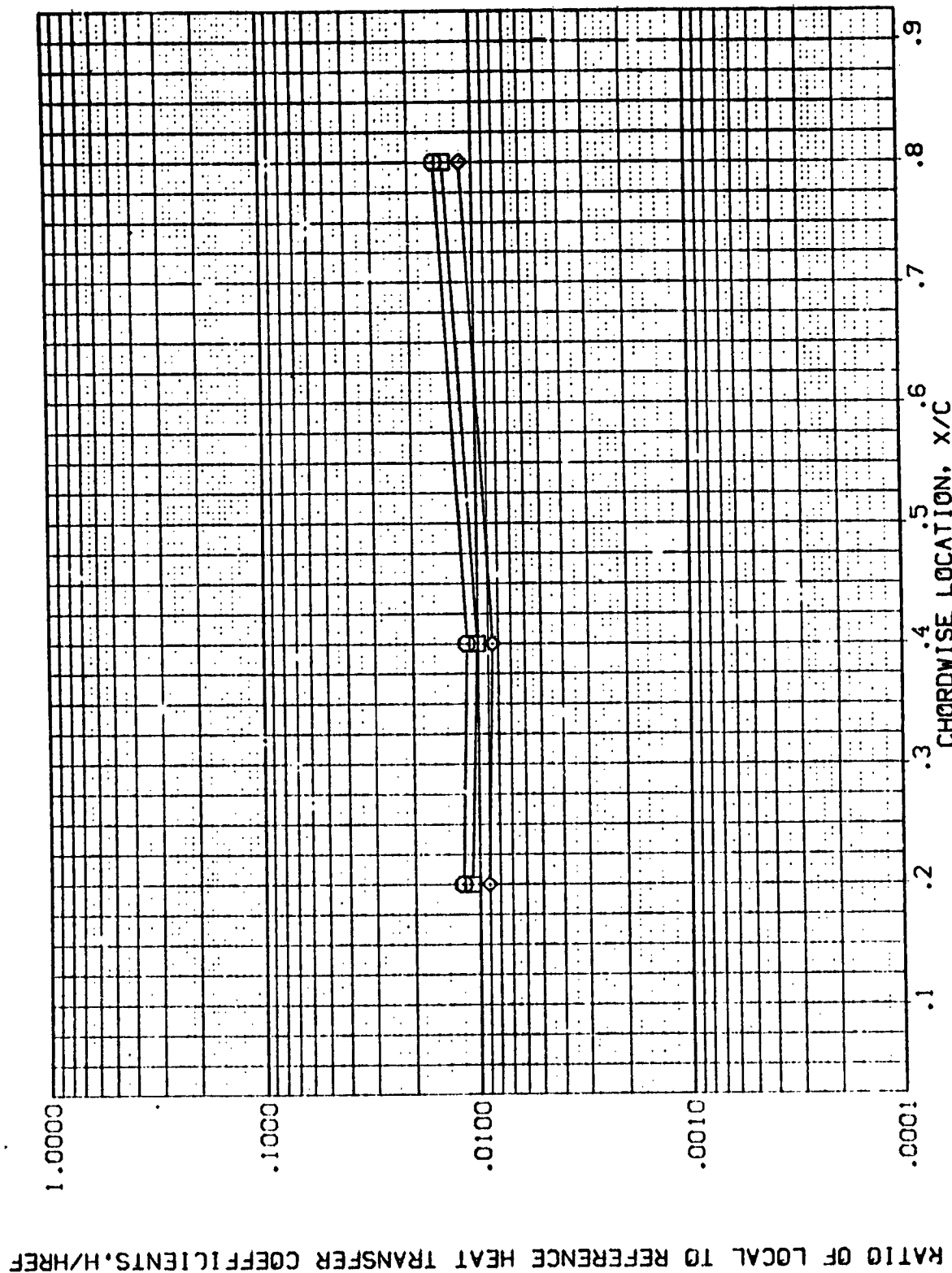


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F10)

SYMBOL	MAV/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.299	ALPHA
□	.900			RN/L
◇	1.000			BETA
				60.000
				4.000
				.080

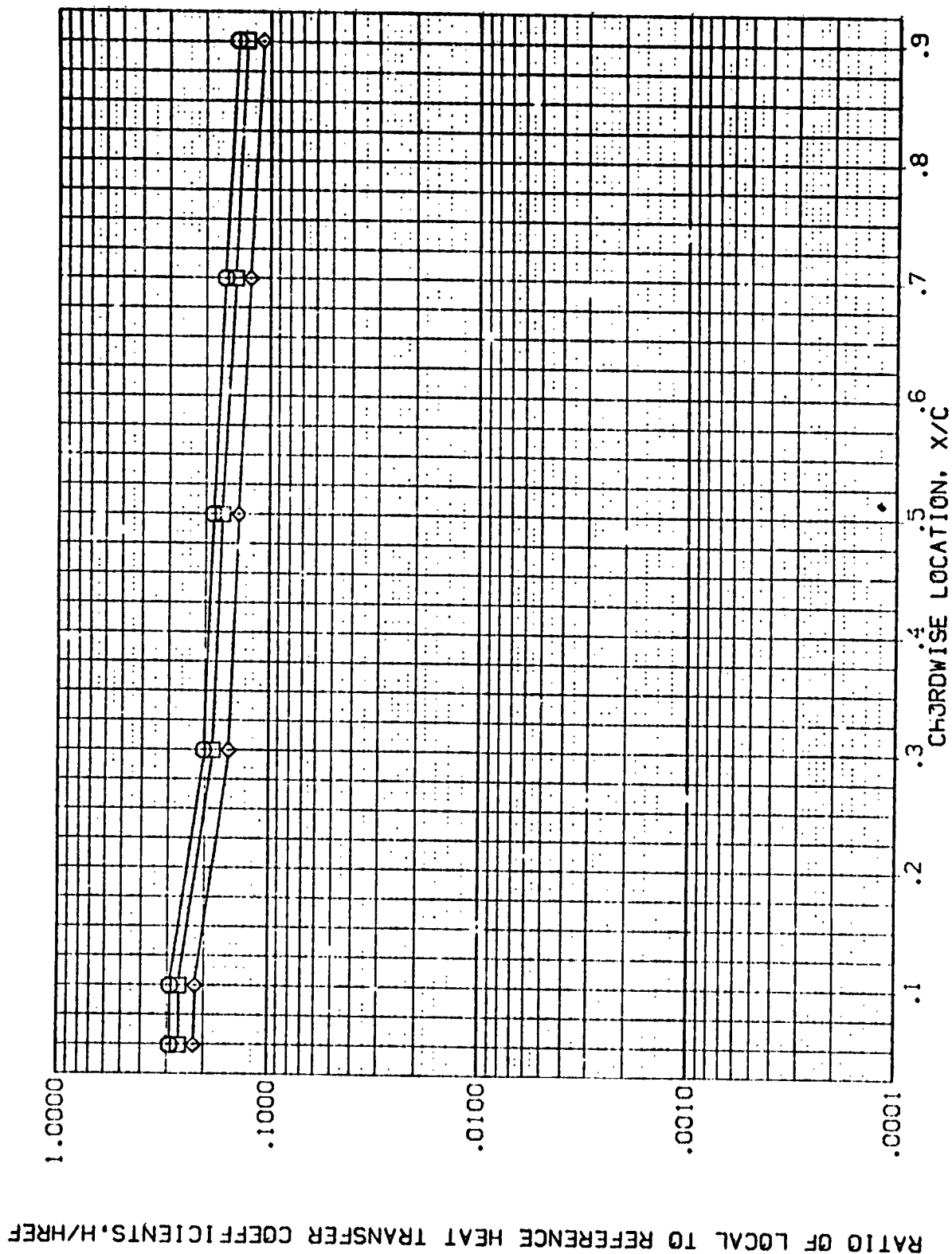


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F10)

SYMBOL	MA _∞ /HT	ZY/B	MACH	PARAMETRIC VALUES
○	.850	.600	5.299	60.000 ALPHA
□	.900			RN/L
◇	1.000			4.000 BETA
				.000

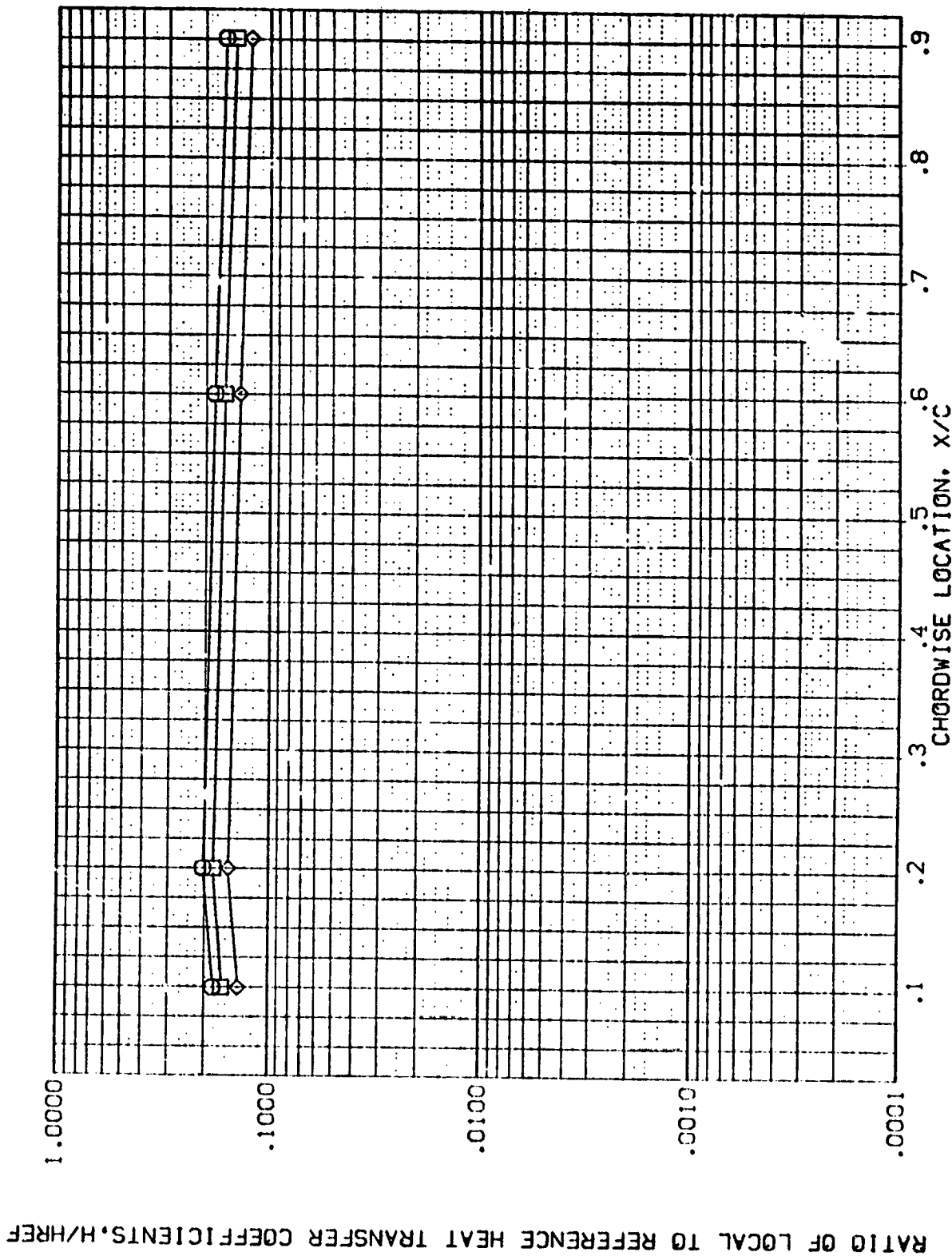


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F10)

SYMBOL	HAIR/HT	2Y/B	MACH	ALPHA	BETA
◇	.850	.800	5.299	60.000	4.000
□	.900				
	1.000				

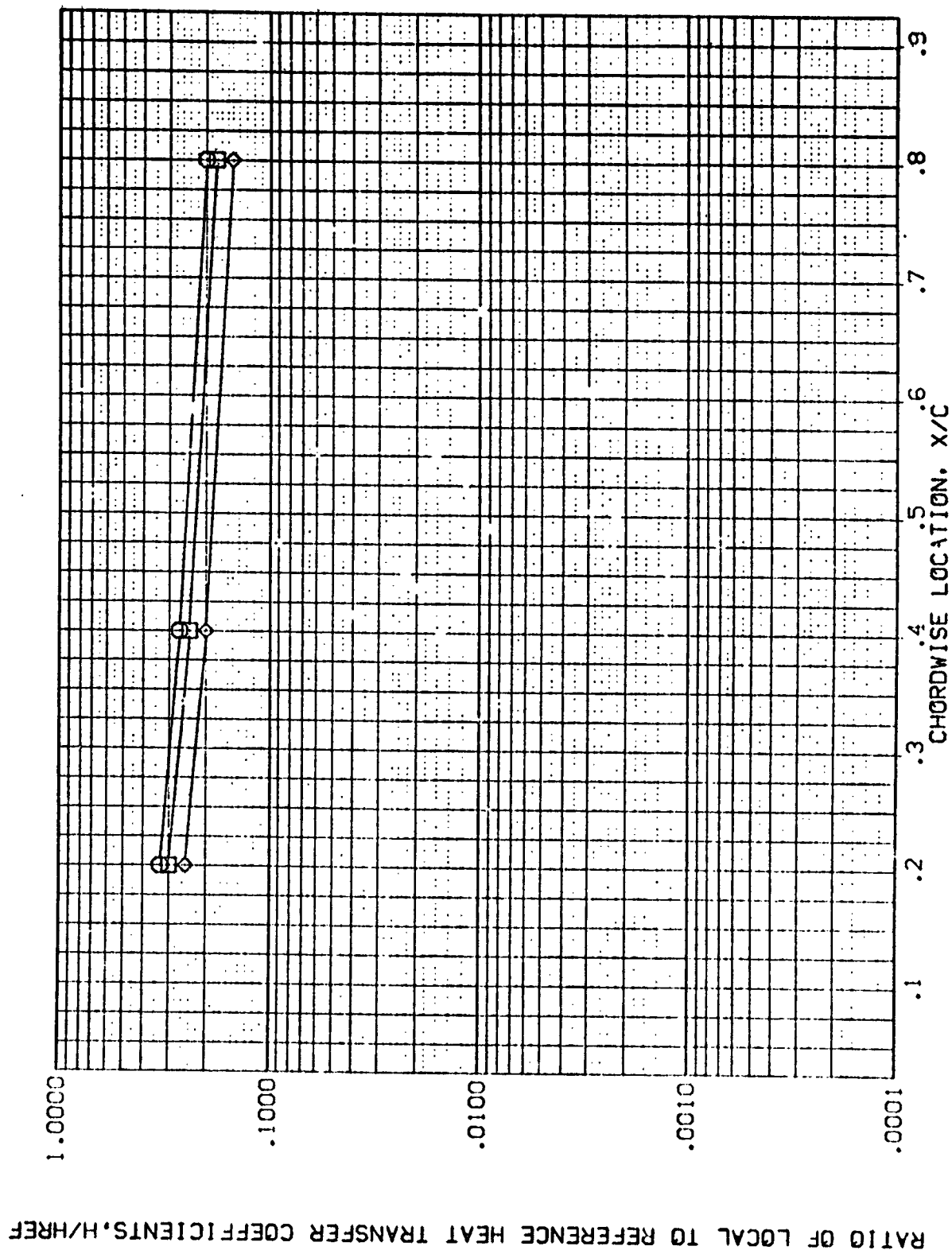


FIG. 20 LEFT WING LOWER SURFACE, CRBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REV F11)

SYMBOL	WING/HT	2% B	MACH	PARAMETRIC VALUES
□	.850	.400	5.300	ALPHA 30.000
◇	.900			REYNOLDS 4.000
	1.000			BETA .000

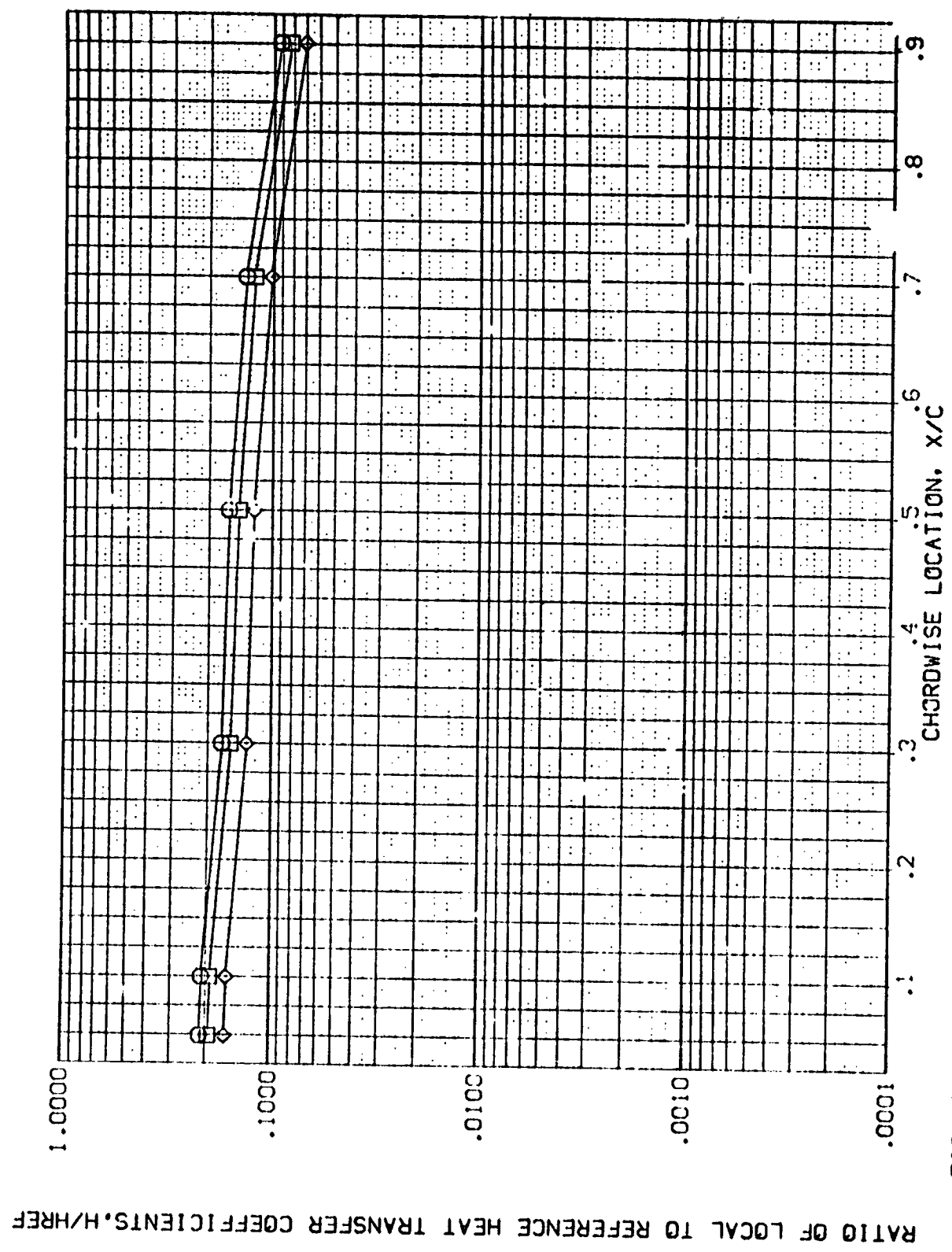


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F11)

PARAMETRIC VALUES
 ALPHA 30.000
 RN/L 4.000
 BETA .000

SYMBOL
 HAN/HT .850
 2Y/B .600
 MACH 5.300
 .900
 1.000

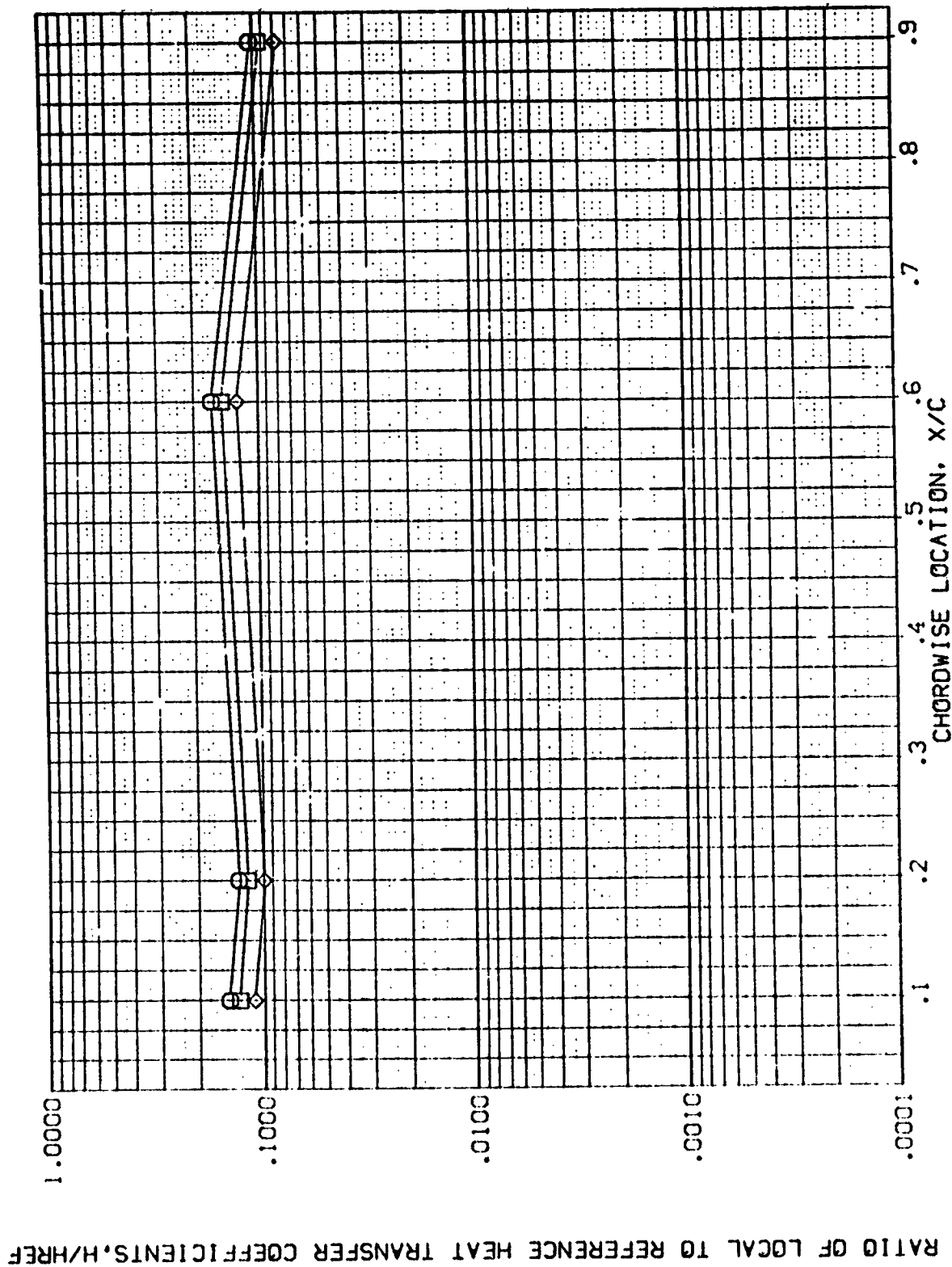


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F11)

SYMBOL	HAW/LT	2Y/B	WACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.800	5.300	30.000	.000
□	.900			4.000	
	1.000				

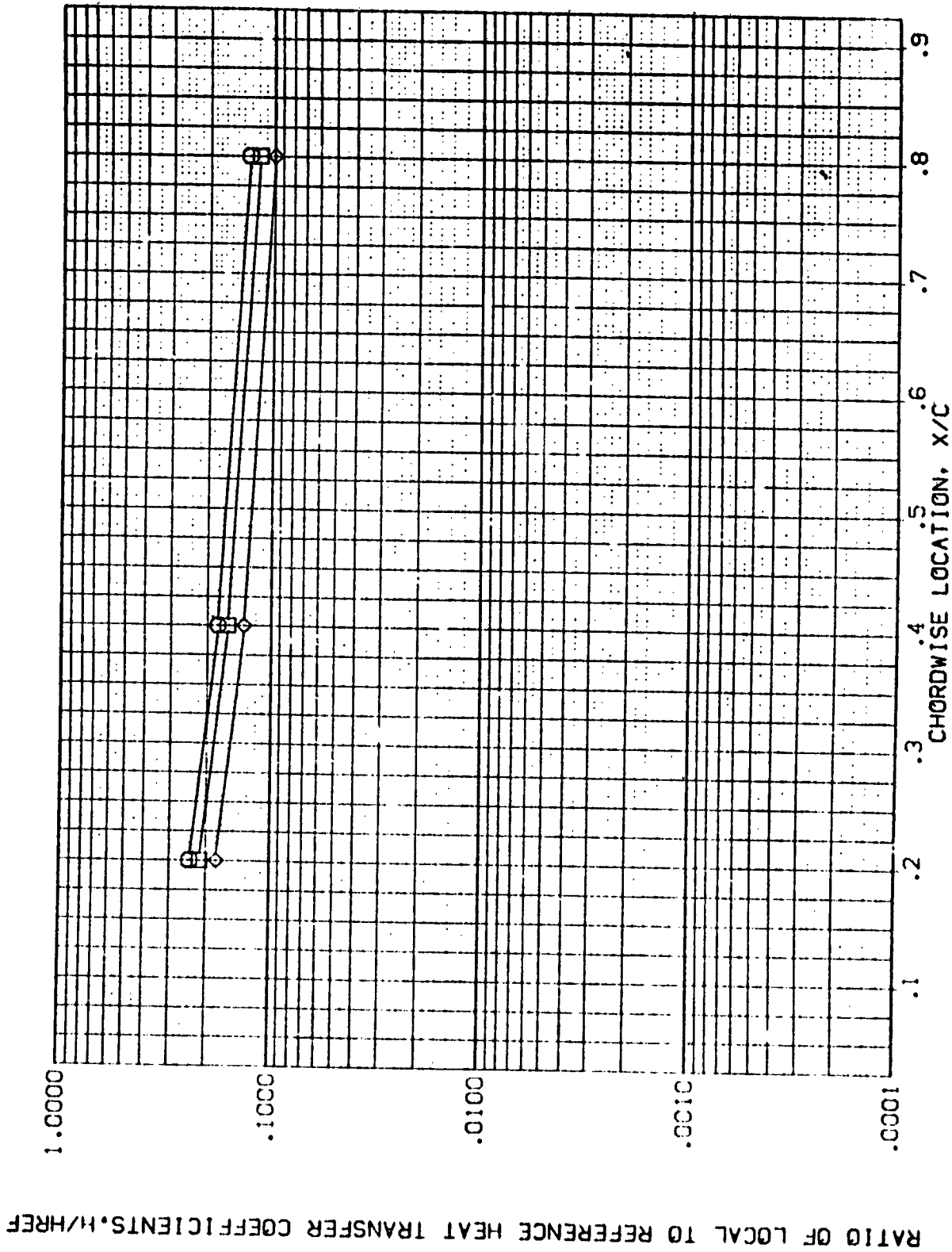


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REV F12)

SYMBOL	HAU/HT	2Y/B	MACH	PARAMETRIC VALUES
□	.850	.400	5.220	ALPHA 30.000 BETA -5.000
◇	.900			RV/L 1.000
◇	1.000			

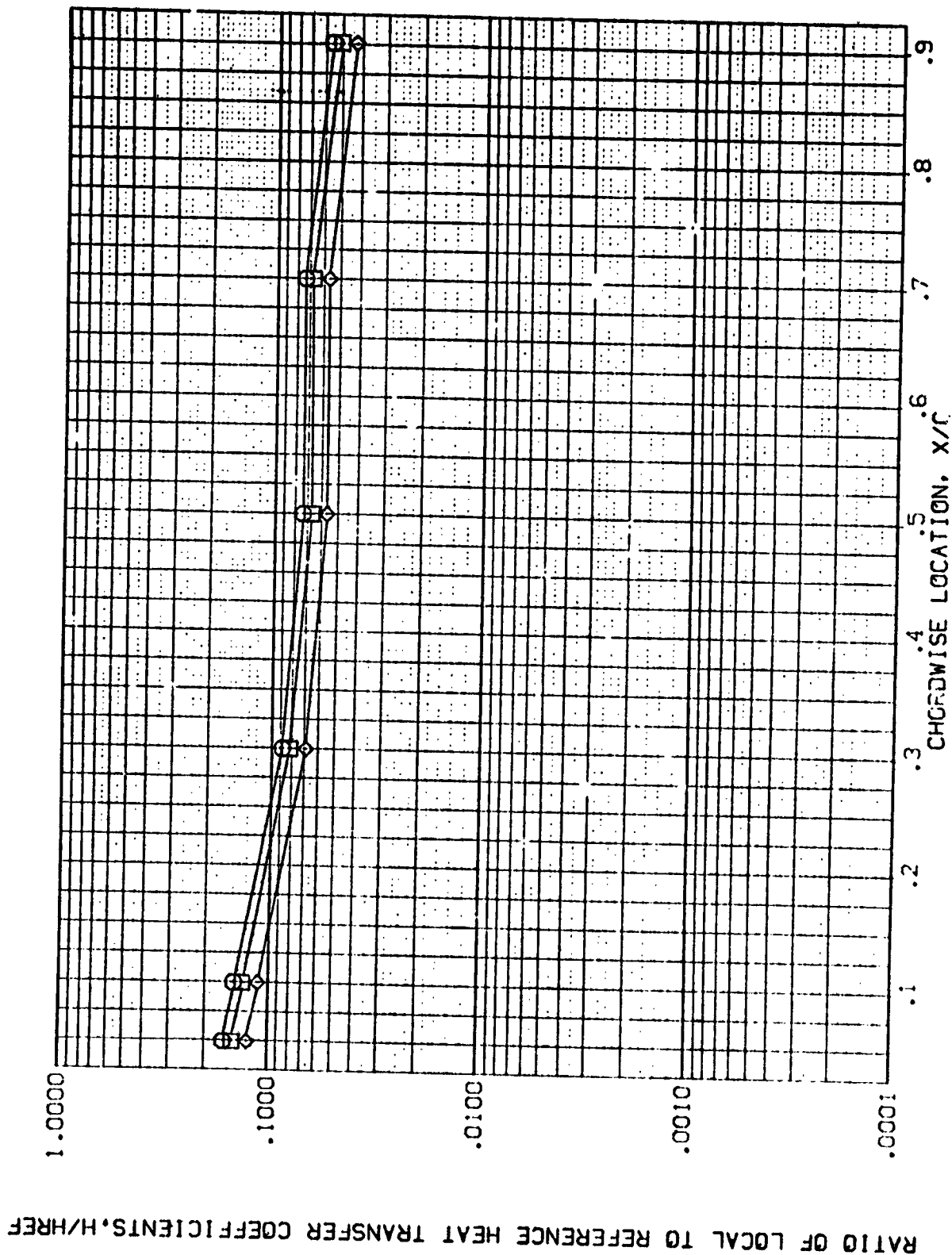


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F12)

SYMBOL
 □
 ◇

HAW/HT .850
 .933
 1.000
 2Y/B .500
 MACH 5.220

PARAMETRIC VALUES
 ALPHA 30.000
 RN/L 1.000
 BETA -5.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

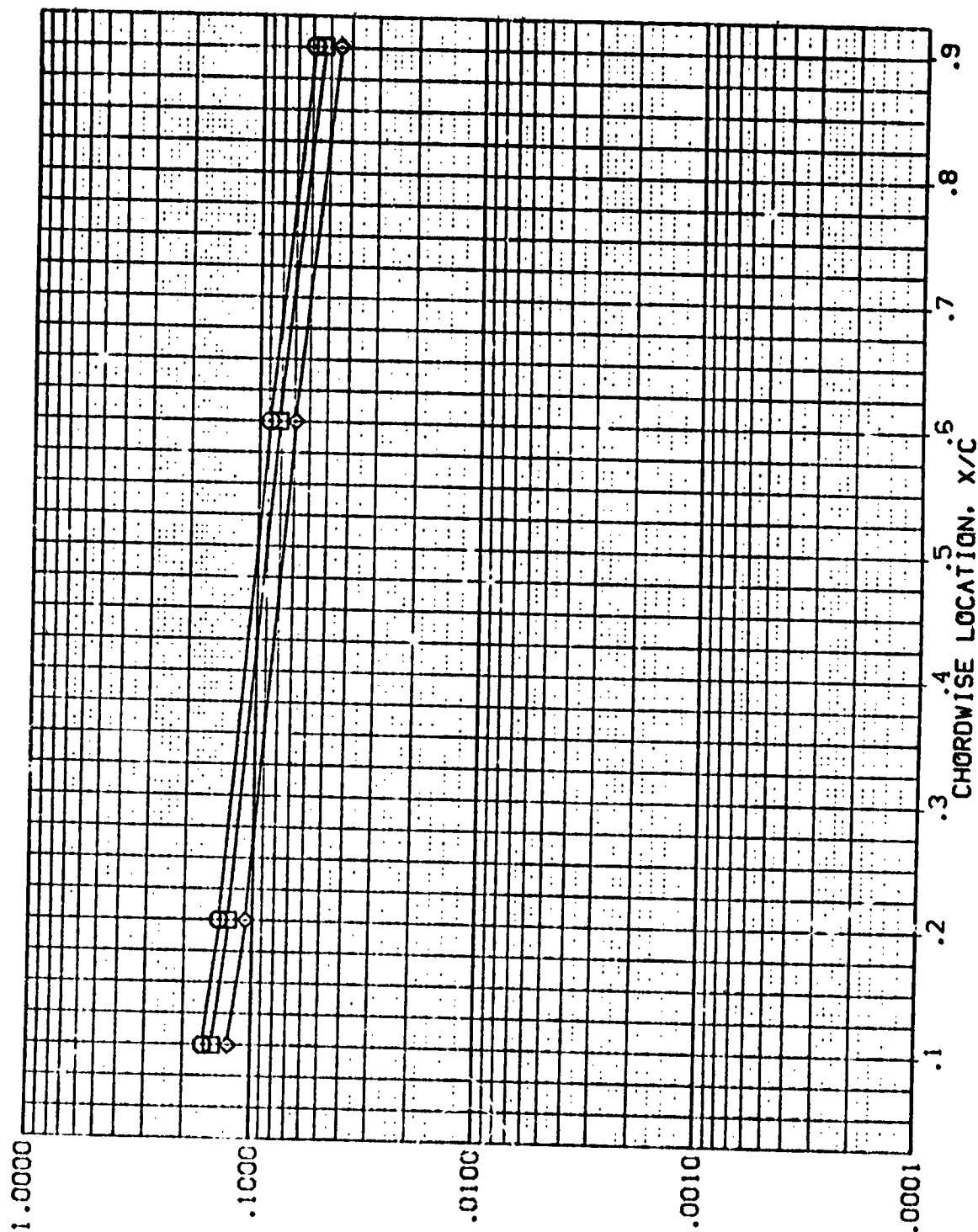


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REV F12)

SYMBOL	HA/WHT	2Y/B	MACH	PARAMETRIC VALUES
◇	.650	.800	5.220	ALPHA
□	.900			RN/L
◇	1.000			BETA
				-5.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

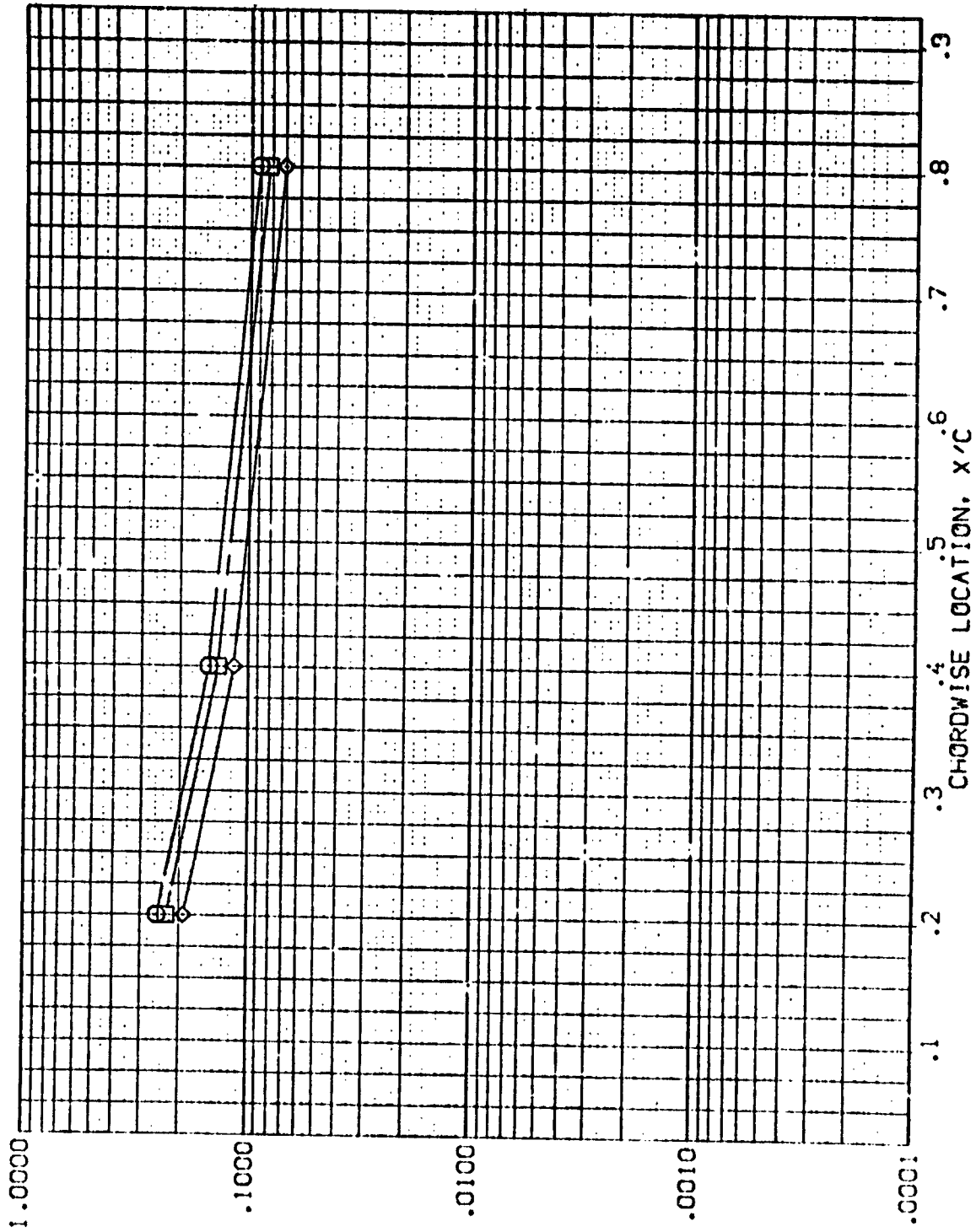


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (REV01) AVE 3.5-195 1428 01+11 WING LOWER SURFACE
 (REV02) AVE 3.5-195 1428 01+11 WING LOWER SURFACE
 (REV03) AVE 3.5-195 1428 01+11 WING LOWER SURFACE
 (REV04) AVE 3.5-195 1428 01+11 WING LOWER SURFACE
 (REV05) AVE 3.5-195 1428 01+11 WING LOWER SURFACE

ALPHA BETA RN/L
 .000 .000 1.000
 30.000 .000 1.000
 60.000 .000 1.000
 90.000 .000 1.000
 120.000 .000 1.000

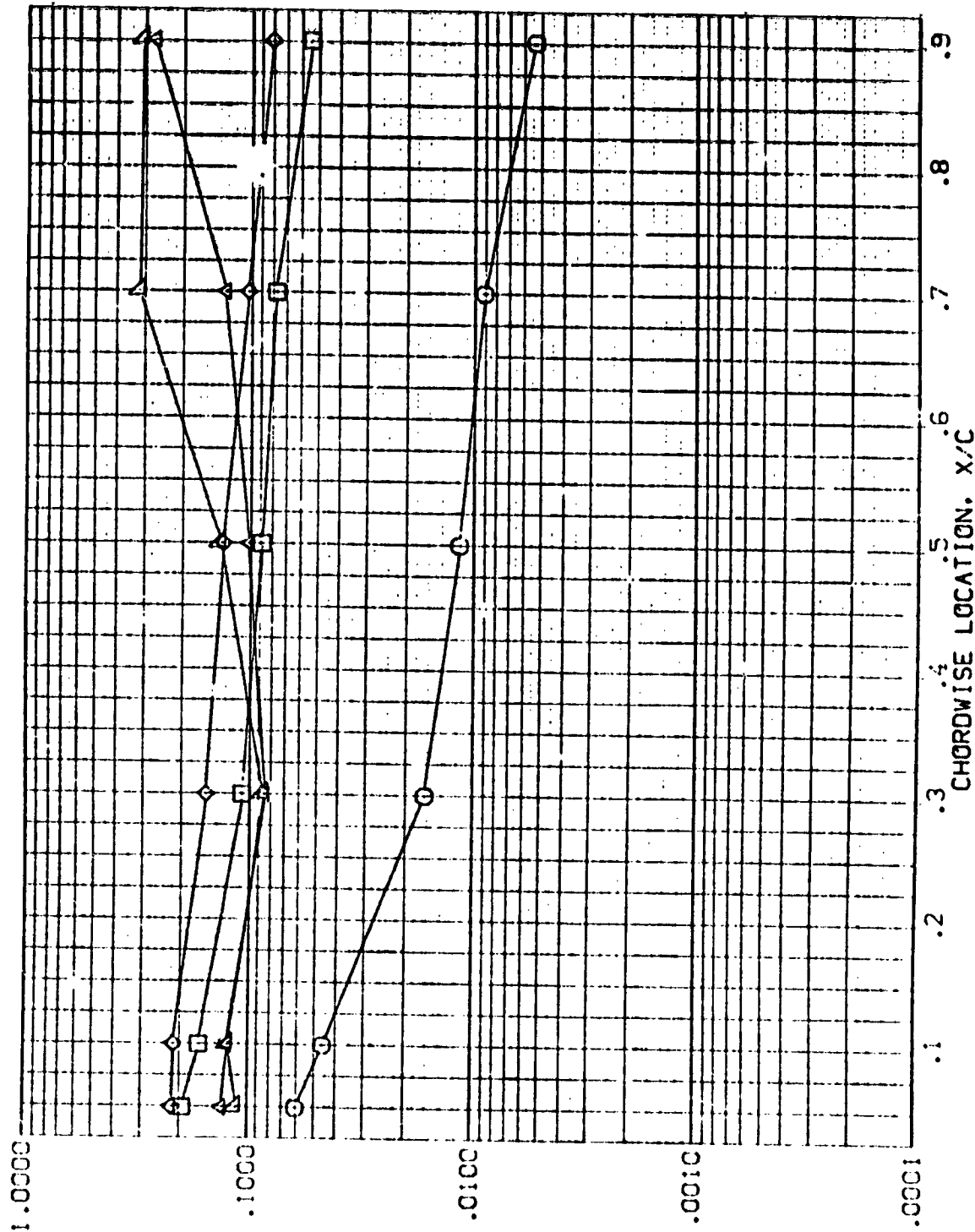


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .400

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

AVES 3.5:195 H28 01:11 WING LOWER SURFACE
 AVES 3.5:195 H28 01:11 WING LOWER SURFACE
 AVES 3.5:195 H28 01:11 WING LOWER SURFACE
 AVES 3.5:195 H28 01:11 WING LOWER SURFACE

ALPHA BETA RV/L
 .300 .000 1.000
 30.000 .000 1.000
 60.000 .000 1.000
 90.000 .000 1.000
 120.000 .000 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

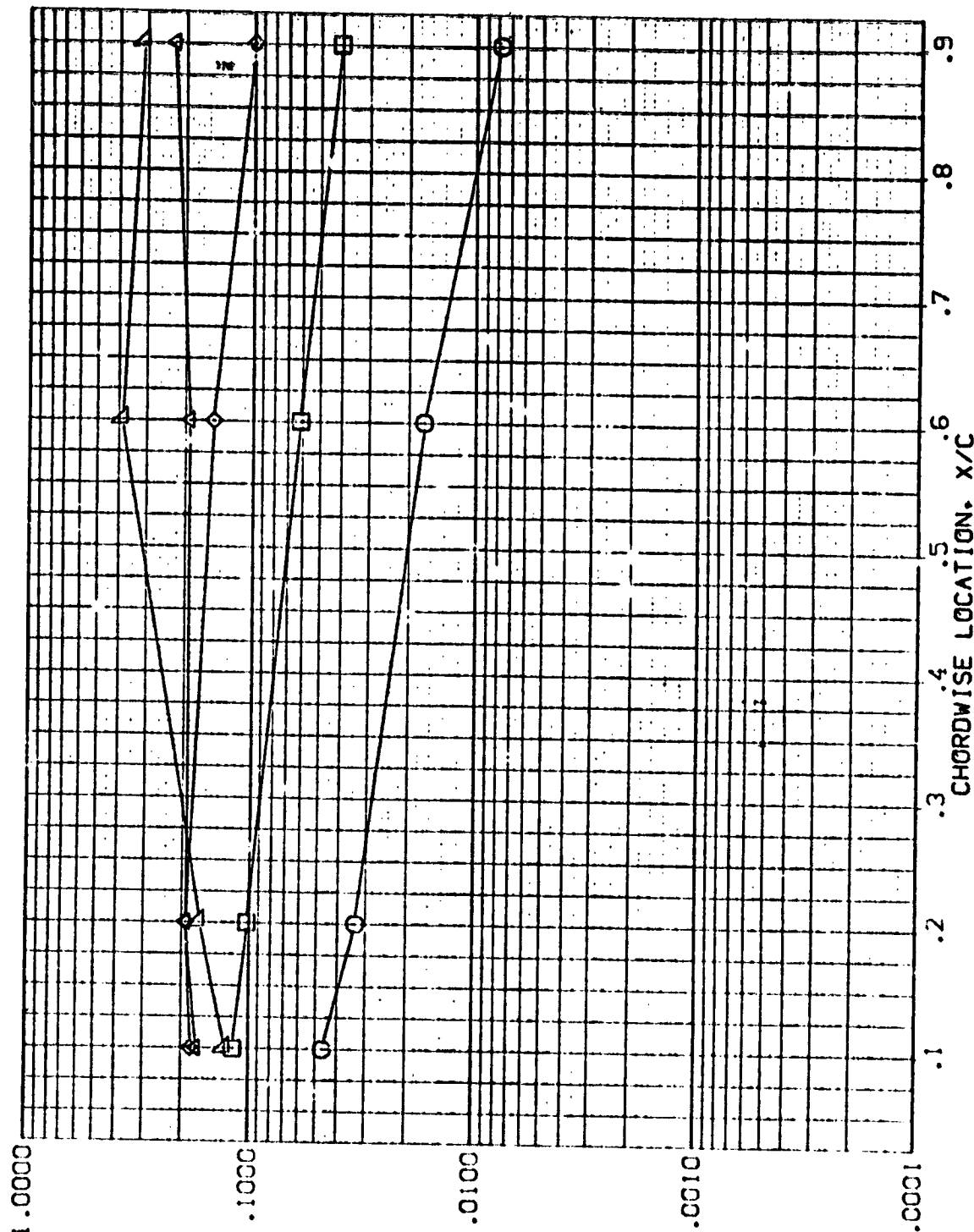


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .600

DATA SET SYMBS: CONFIGURATION DESCRIPTION

(REV001)	AMES 3.5-195	1428	01+11	WING	LOWER SURFACE
(REV002)	AMES 3.5-195	1428	01+11	WING	LOWER SURFACE
(REV003)	AMES 3.5-195	1428	01+11	WING	LOWER SURFACE
(REV004)	AMES 3.5-195	1428	01+11	WING	LOWER SURFACE
(REV005)	AMES 3.5-195	1428	01+11	WING	LOWER SURFACE

ALPHA BETA FN/L

.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
90.000	.000	1.000
120.000	.000	1.000

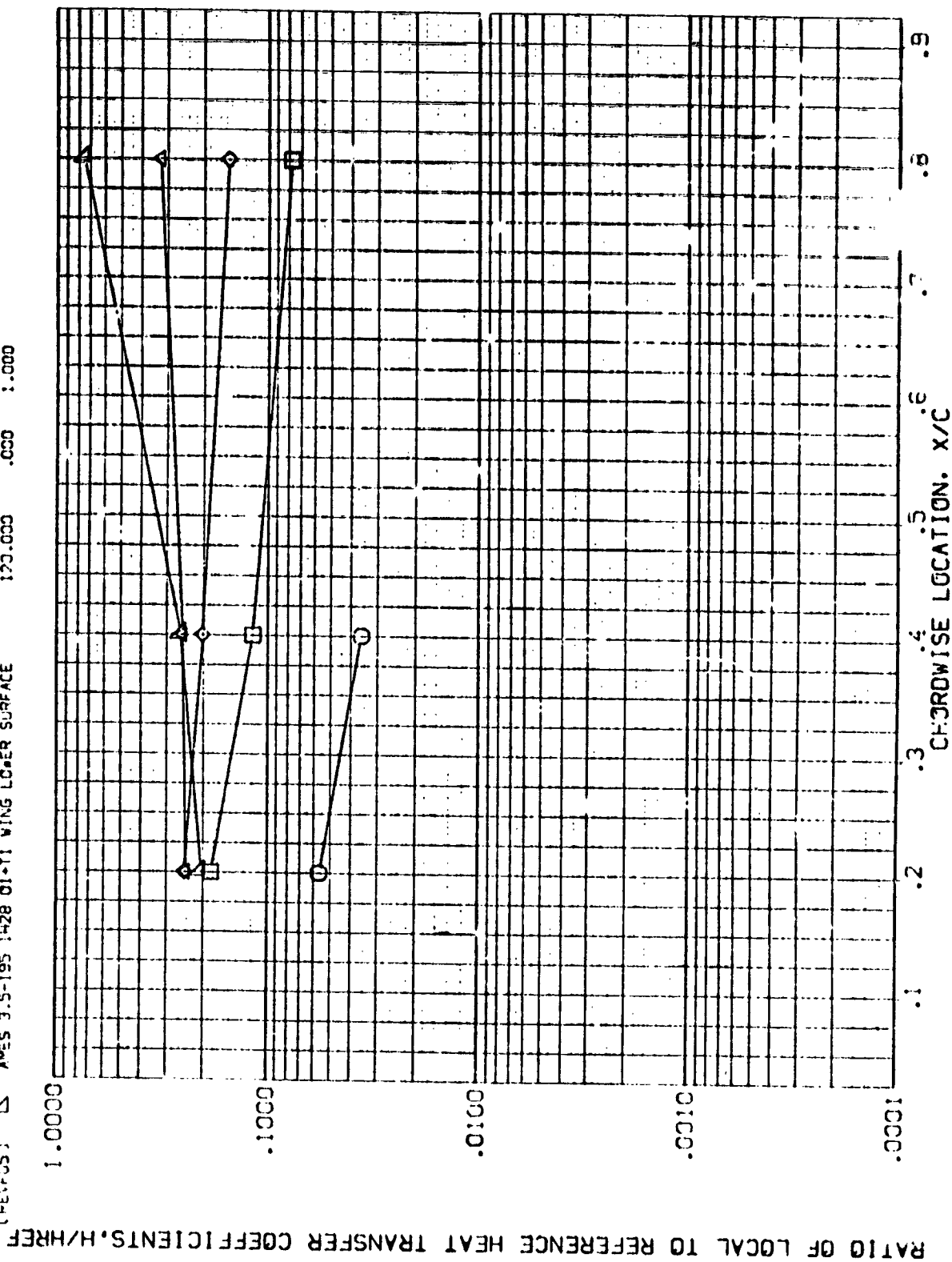


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .800

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RV/L
(REVFO1)	AMES 3.5-195 H28 01+T1 WING LOWER SURFACE	.000	.000	1.000
(REVFO9)	AMES 3.5-195 H28 01+T1 WING LOWER SURFACE	-30.000	.000	1.000
(REVFO8)	AMES 3.5-195 H28 01+T1 WING LOWER SURFACE	-60.000	.000	1.000
(REVFO7)	AMES 3.5-195 H28 01+T1 WING LOWER SURFACE	-90.000	.000	1.000
(REVFO6)	AMES 3.5-195 H28 01+T1 WING LOWER SURFACE	-120.000	.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

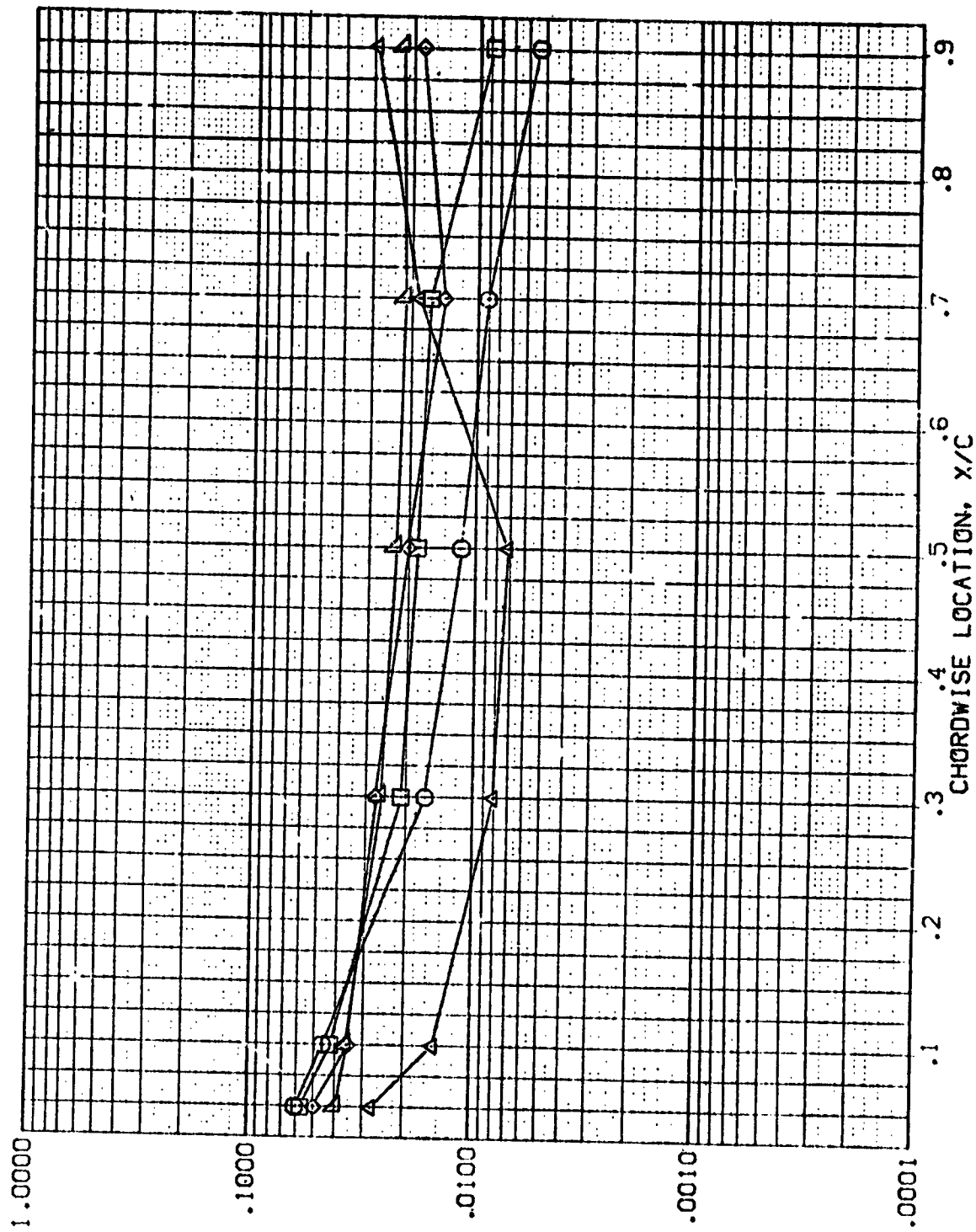


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .400

DATA SET SYMBOL
(REVFC1)
(REVFC2)
(REVFC3)
(REVFC4)
(REVFC5)

CONFIGURATION DESCRIPTION

AMES 3.5-195 IH28 01+11 WING LOWER SURFACE
AMES 3.5-195 IH28 01+11 WING LOWER SURFACE
AMES 3.5-195 IH28 01+11 WING LOWER SURFACE
AMES 3.5-195 IH28 01+11 WING LOWER SURFACE
AMES 3.5-195 IH28 01+11 WING LOWER SURFACE

ALPHA BETA RN/L
.000 .000 1.000
-30.000 .000 1.000
-60.000 .000 1.000
-90.000 .000 1.000
-120.000 .000 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

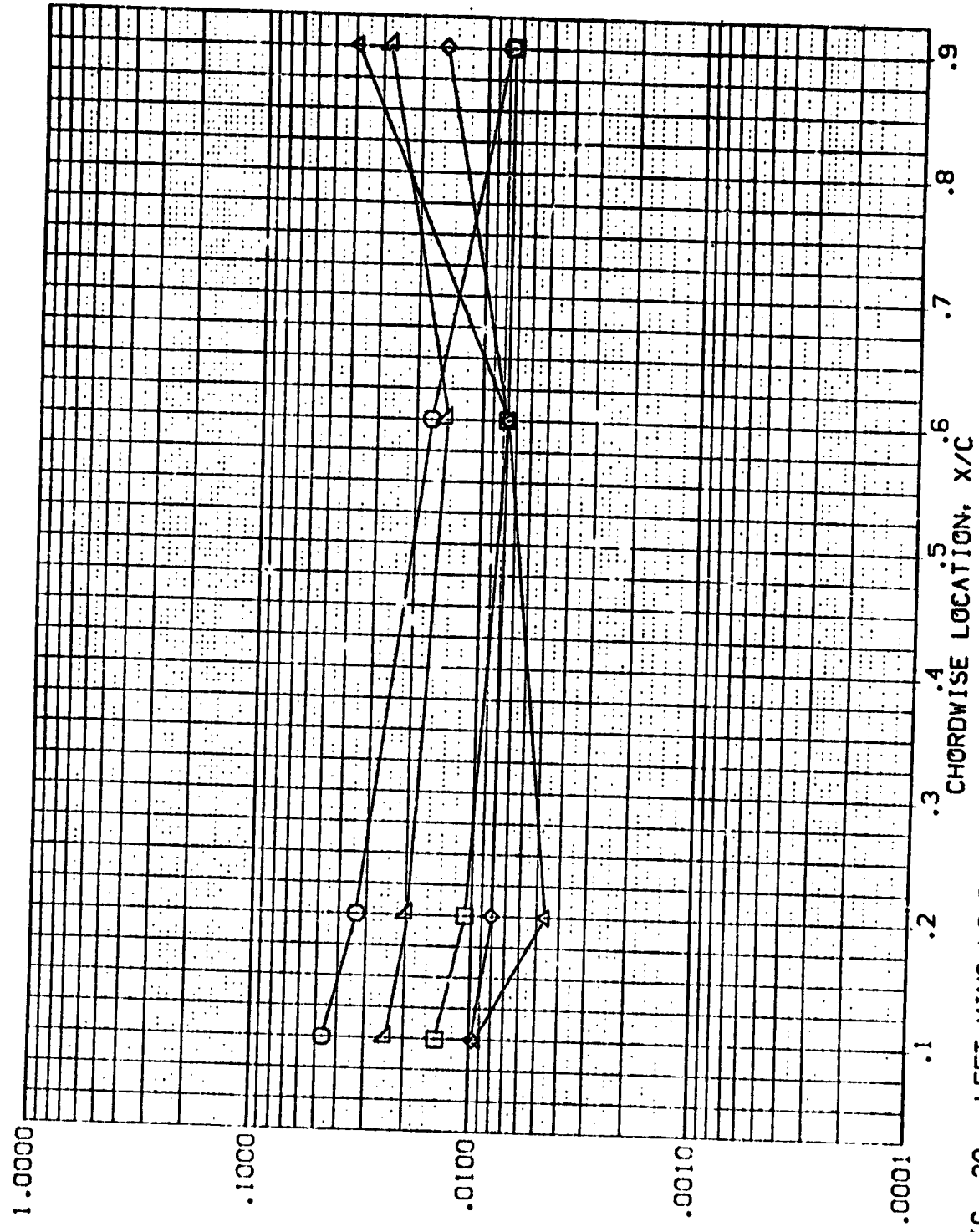


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .600

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(PREV01)	AMES 3-5-195 (M28 01+1) WING LOWER SURFACE	.000	.000	1.000
(PREV02)	AMES 3-5-195 (M28 01+1) WING LOWER SURFACE	-30.000	.000	1.000
(PREV03)	AMES 3-5-195 (M28 01+1) WING LOWER SURFACE	-60.000	.000	1.000
(PREV04)	AMES 3-5-195 (M28 01+1) WING LOWER SURFACE	-90.000	.000	1.000
(PREV05)	AMES 3-5-195 (M28 01+1) WING LOWER SURFACE	-120.000	.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

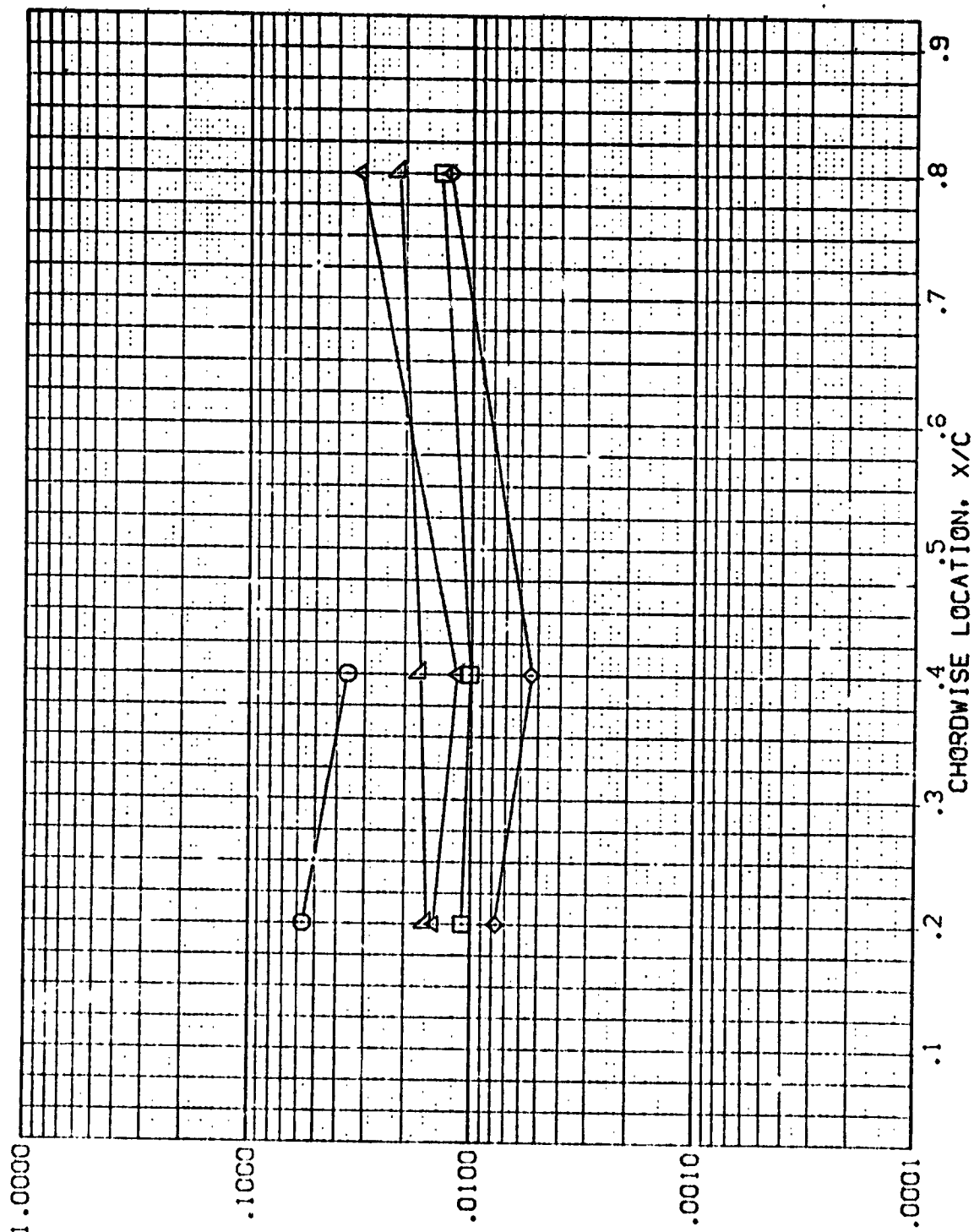
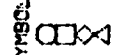


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 H/W/HT = .900 2Y/B = .300

DATA SET SYMBOLS:  CONFIGURATION DESCRIPTION
 ARES 3-5-195 1.28 01+11 WING LOWER SURFACE
 ARES 3-5-195 1.28 01+11 WING LOWER SURFACE
 ARES 3-5-195 1.28 01+11 WING LOWER SURFACE
 ARES 3-5-195 1.28 01+11 WING LOWER SURFACE

ALPHA BETA RV/L
 30.000 .000 1.000
 30.000 .000 4.000
 50.000 .000 1.000
 50.000 .000 4.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

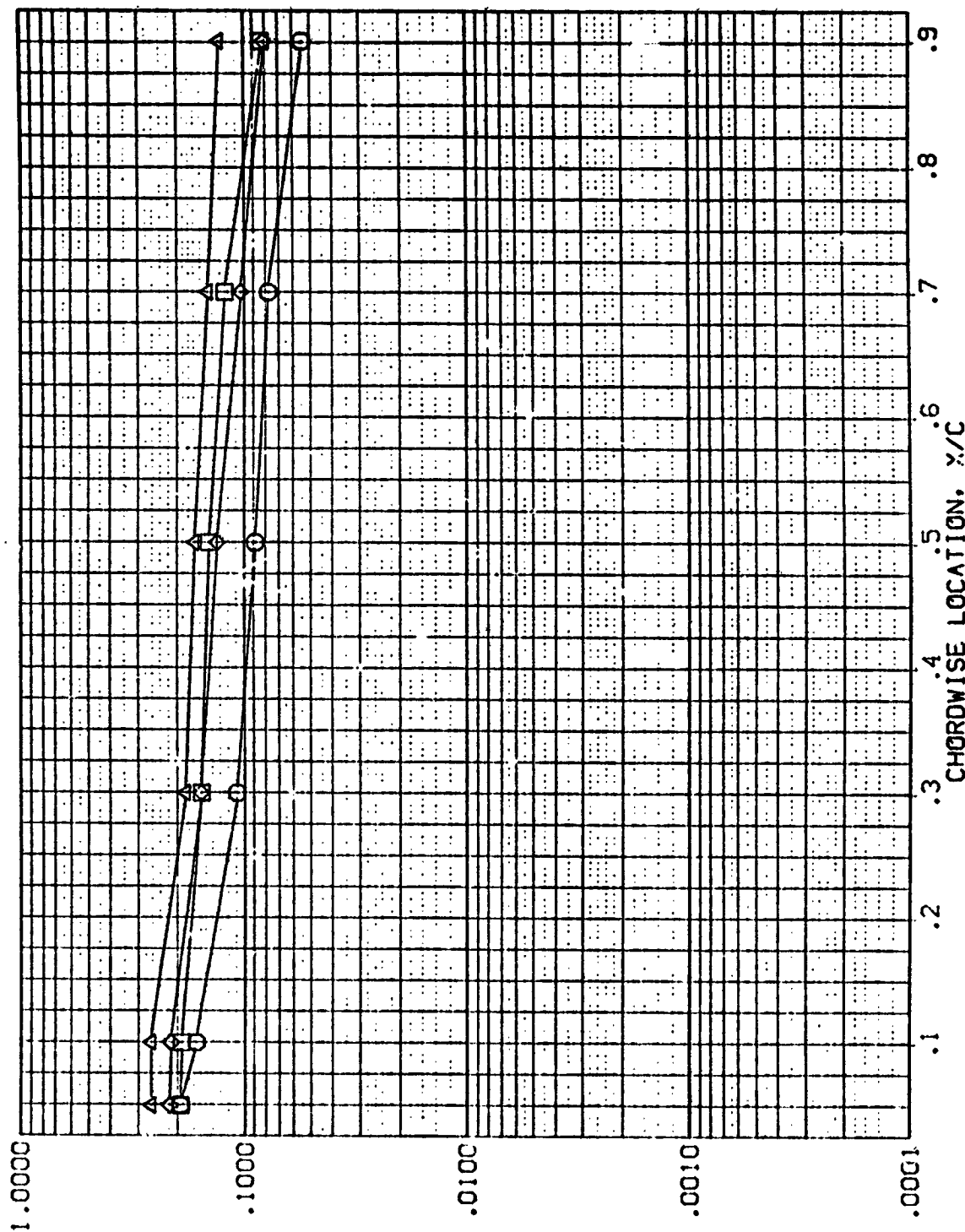


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 $HAW/HT = .900$ $2Y/B = .400$

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REPRODUCIBILITY OF FIGURE
 ORIGINAL PAGE IS PAGE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RV/L
(REVFO2)	AVES 3.5-195 1428 01+11 WING LOWER SURFACE	30.000	.000	1.000
(REVFI1)	AVES 3.5-195 1428 01+11 WING LOWER SURFACE	30.000	.000	4.000
(REVFO3)	AVES 3.5-195 1428 01+11 WING LOWER SURFACE	60.000	.000	1.000
(REVFI0)	AVES 3.5-195 1428 01+11 WING LOWER SURFACE	60.000	.000	4.000

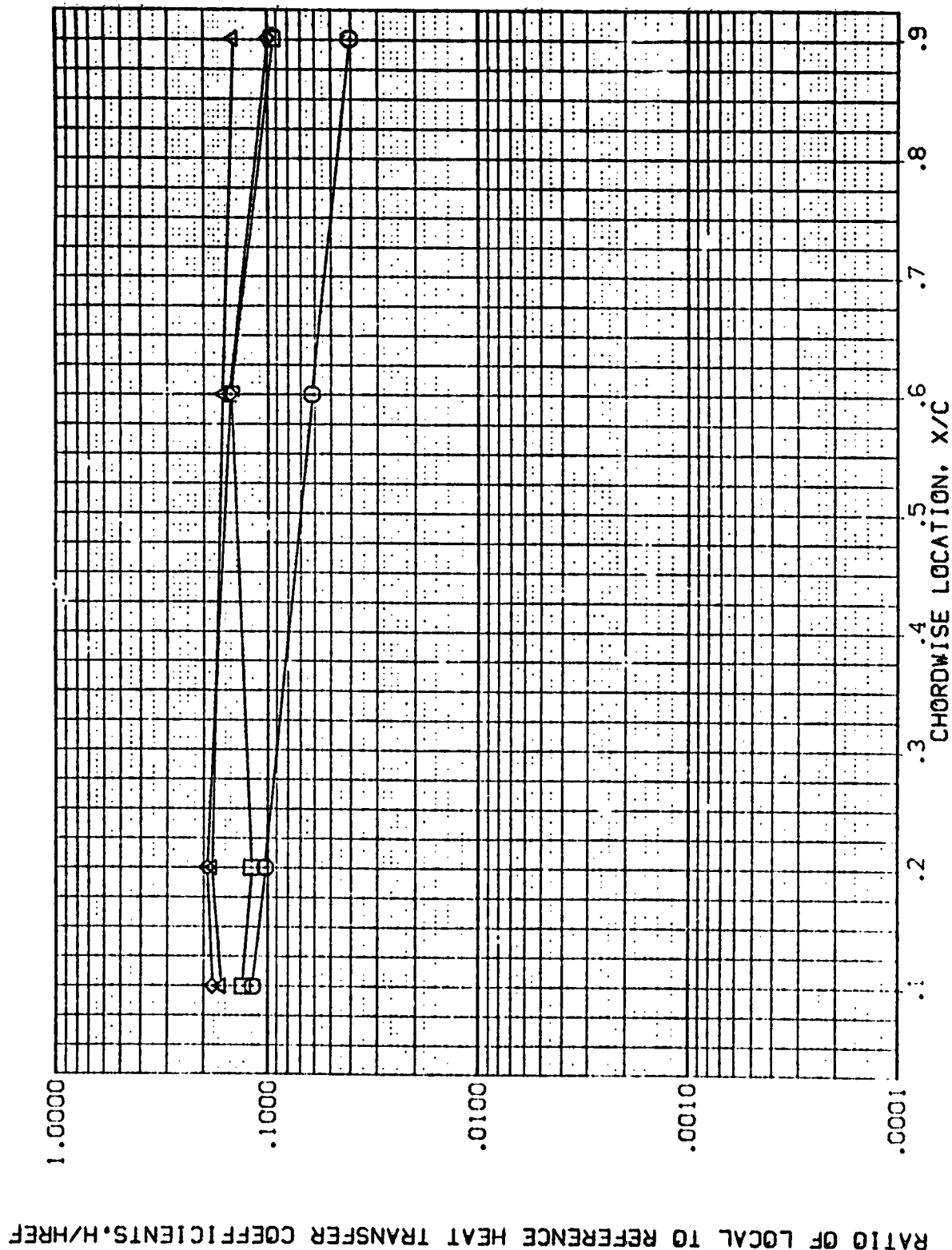


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 $h_{w}/h_{t} = .900$ $2y/b = .600$

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

DATA SET SYMBOL
(REVFO2)
(REVFI1)
(REVFO3)
(REVFI0)

CONFIGURATION DESCRIPTION
AMES 3-5-195 IN28 CI+T1 WING LOWER SURFACE
AMES 3-5-195 IN28 CI+T1 WING LOWER SURFACE
AMES 3-5-195 IN28 CI+T1 WING LOWER SURFACE
AMES 3-5-195 IN28 CI+T1 WING LOWER SURFACE

ALPHA BETA RV/L
30.000 .000 1.000
30.000 .000 4.000
60.000 .000 1.000
60.000 .000 4.000

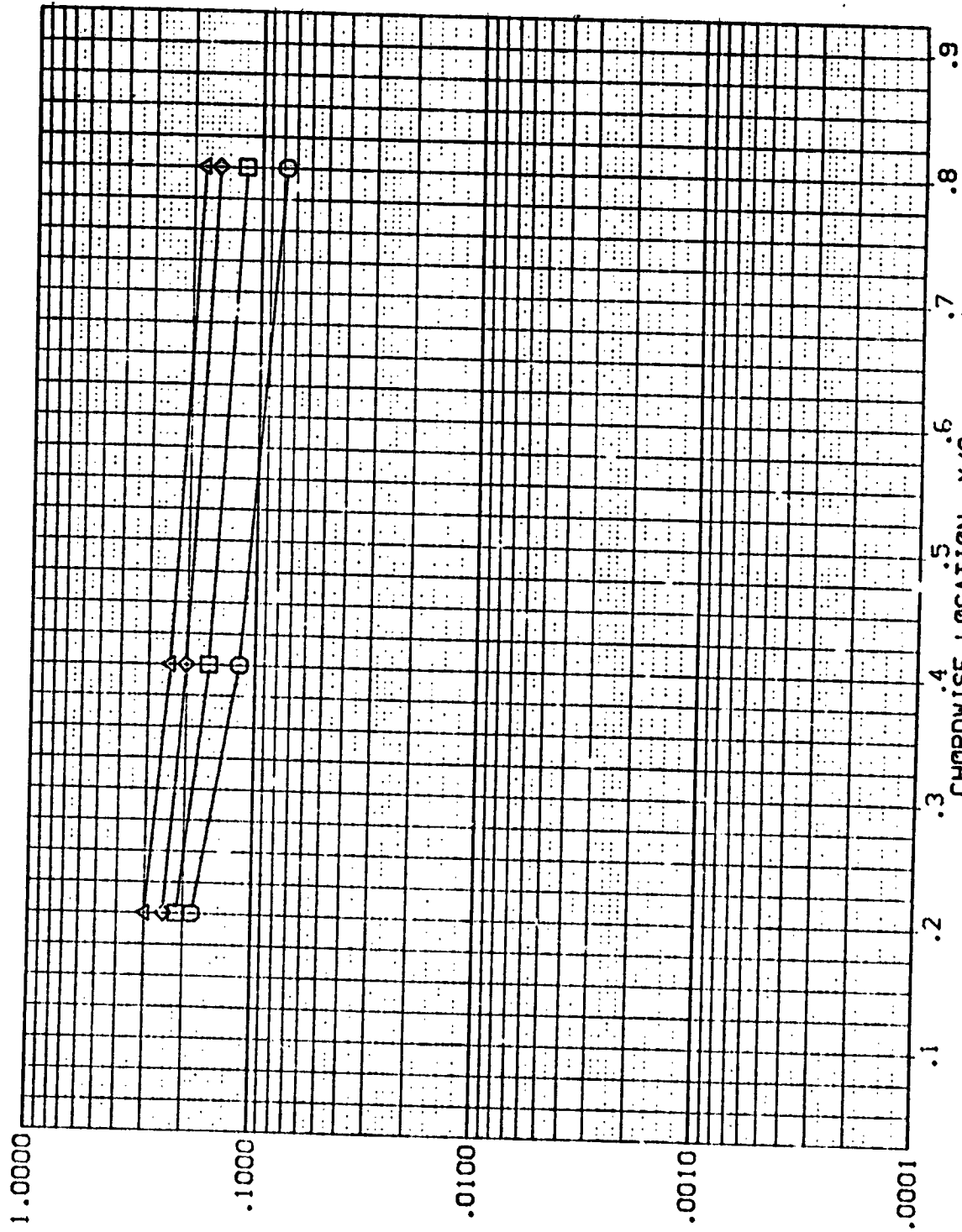


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 $H_{A0}/H_T = .900$ $2Y/B = .800$

DATA SET SYMBOL: **8** CONFIGURATION DESCRIPTION: AMES 3.5-195 1x28 01+11 WING LOWER SURFACE
 (REV 02) AMES 3.5-195 1x28 01+11 WING LOWER SURFACE
 (REV 12)

ALPHA: 30.000 30.000
 BETA: .000 -5.000
 RN/L: 1.000 1.000

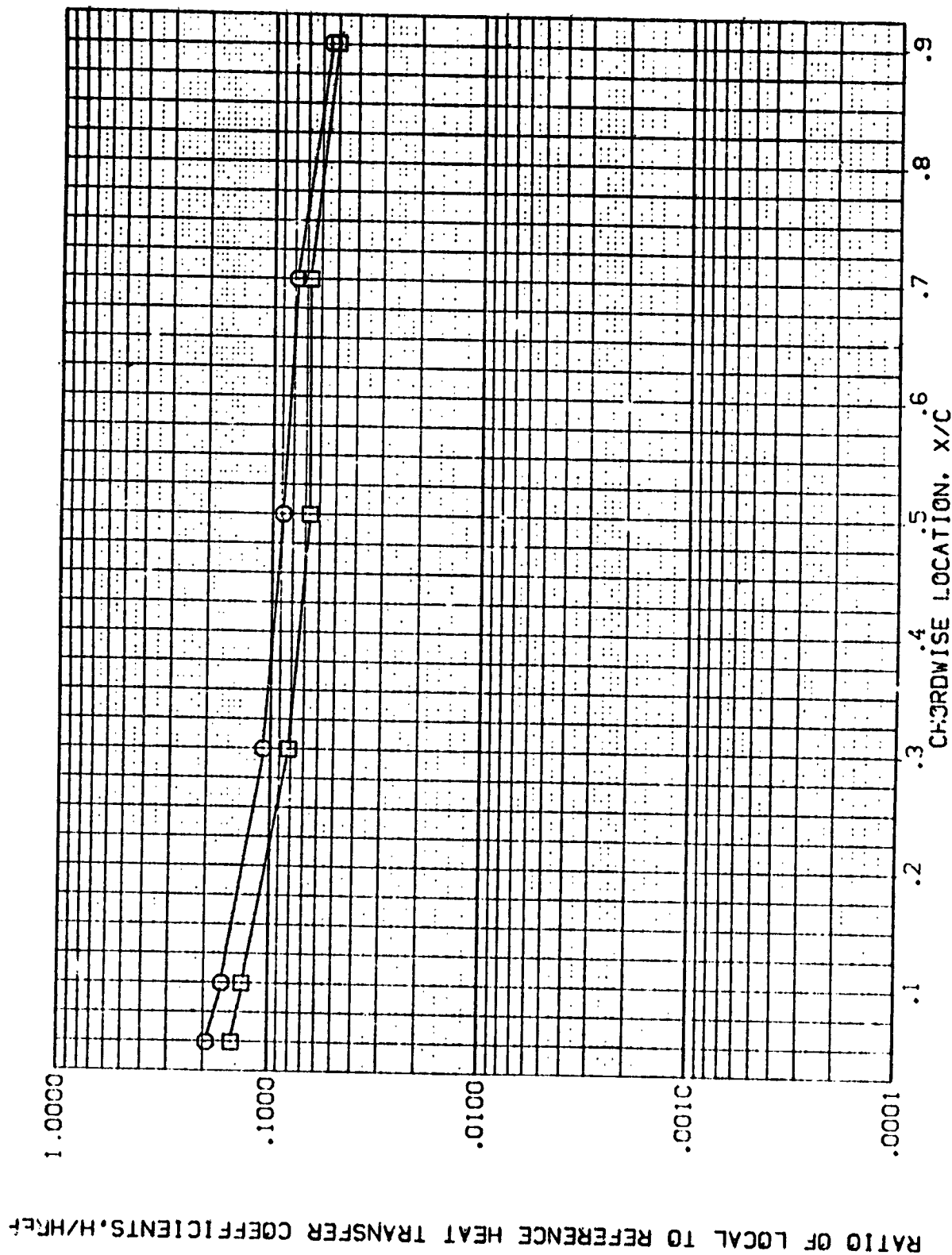
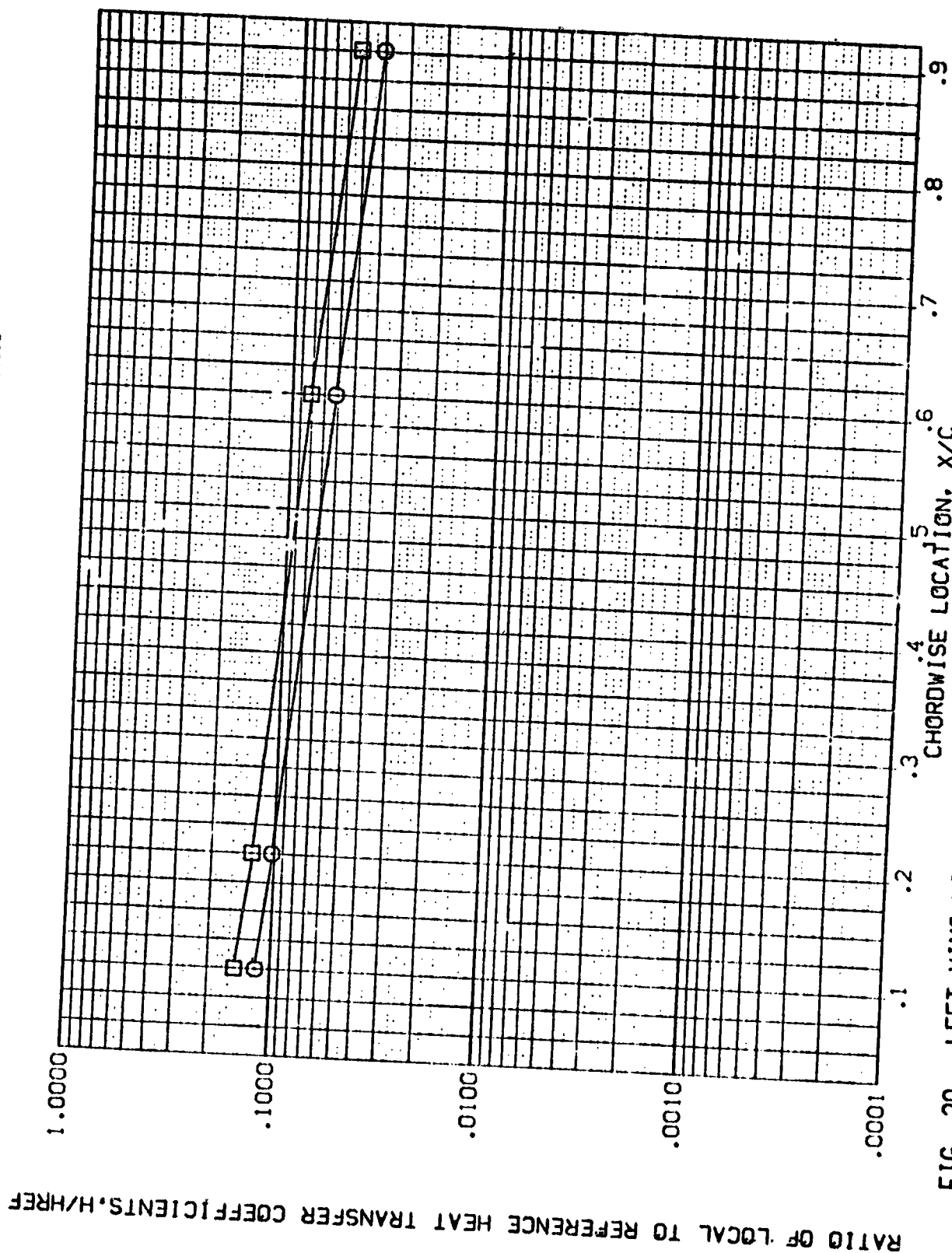


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

$MACH = 5.300$ $HAW/HT = .900$ $2Y/B = .400$

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (REV/F02) AMES 3.5-195 [428 01+T] WING LOWER SURFACE
 (REV/F12) AMES 3.5-195 [428 01+T] WING LOWER SURFACE

ALPHA BETA RV/L
 30.000 .000 1.000
 30.000 -5.000 1.000



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (REV#02) B AMES 3.5-195 [428 01-T] WING LOWER SURFACE
 (REV#12) AMES 3.5-195 [428 01-T] WING LOWER SURFACE

ALPHA 30.000
 BETA -5.000
 RN/L 1.000
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

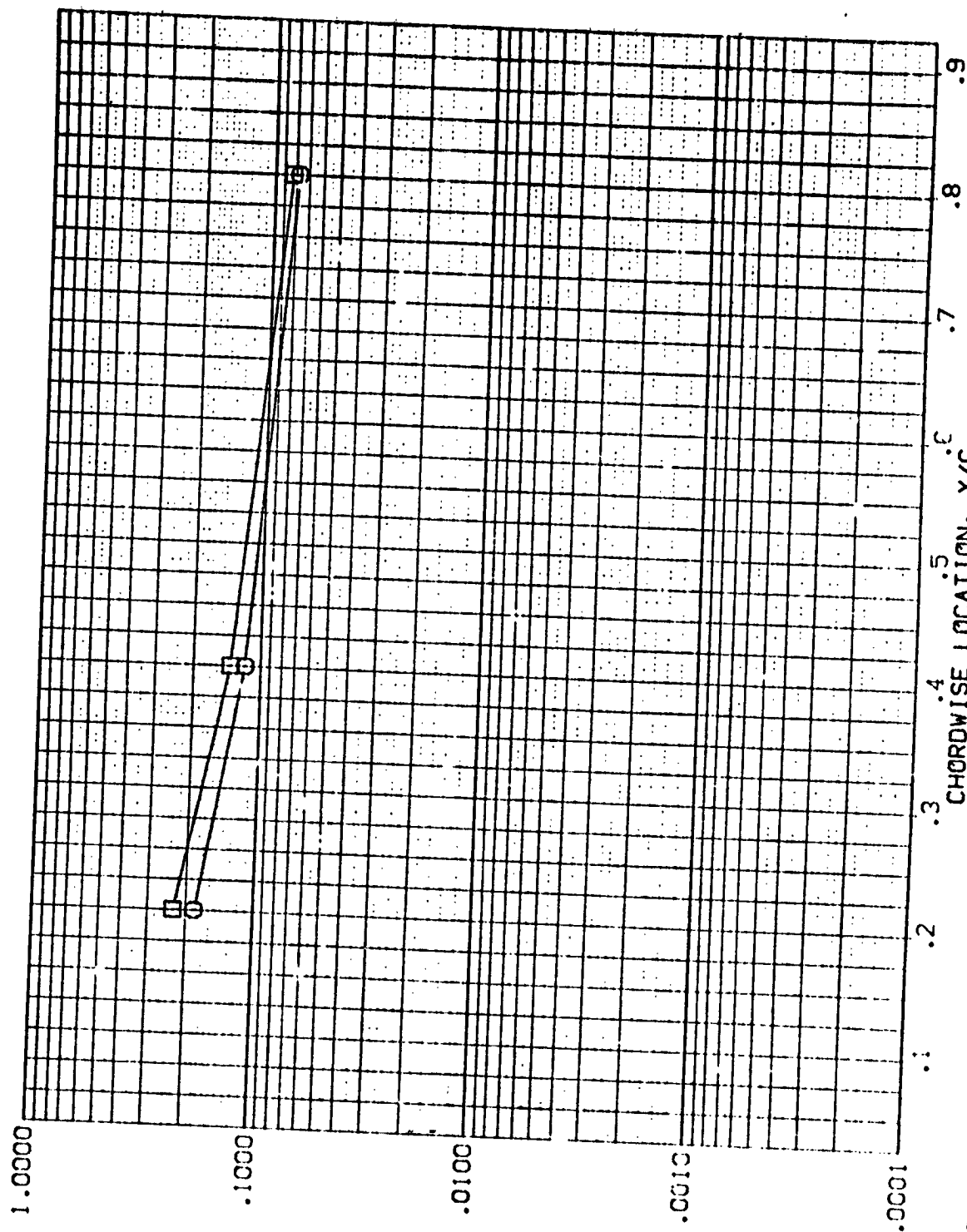


FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 h_{REF}/h_{REF} = .900 $2^{\circ}/B$ = .800

AMES 3.5-195 IH28 01+11 WING LOWER SURFACE (BEVF01)

SYMBOL 2Y/B HAW/HT MACH
 □ .400
 □ .600
 ◇ .800

PARAMETRIC VALUES
 ALPHA .000
 RN/L 1.000
 BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

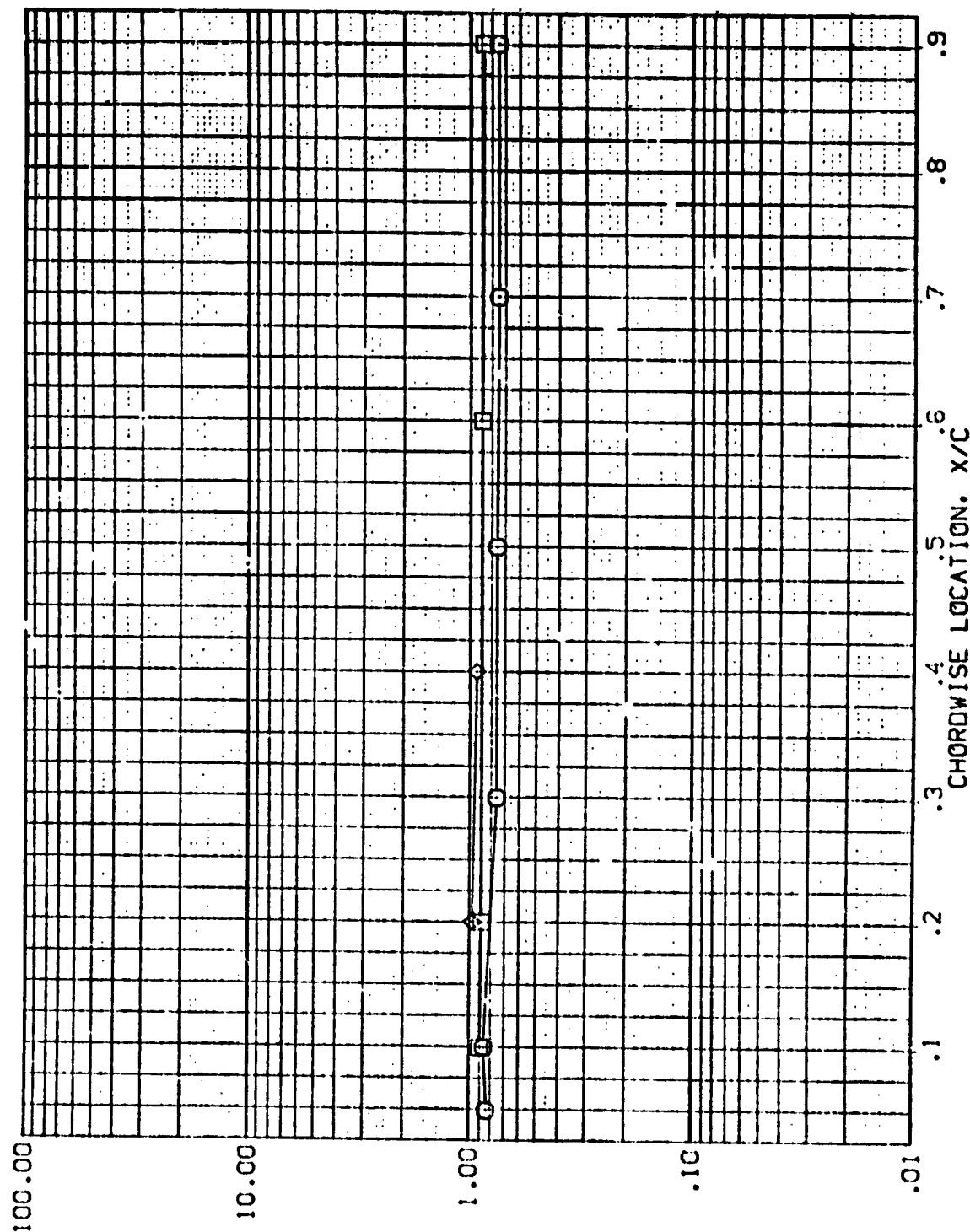


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF02)

SYMBOL 2Y/B

MAW/MT MACH
 .400 .500 5.219
 .600 .800

PARAMETRIC VALUES
 ALPHA 30.000 BETA .000
 RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

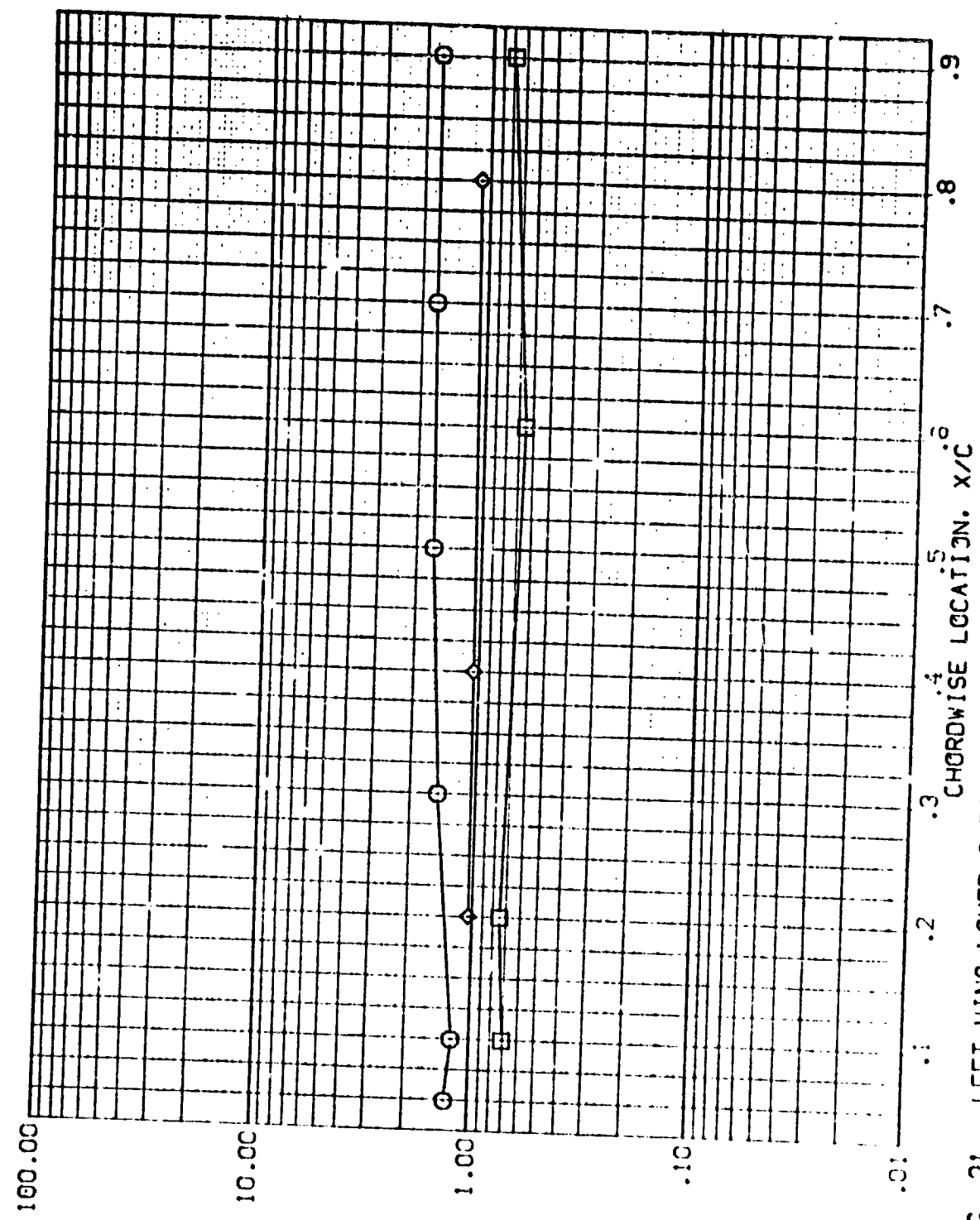


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF03)

SYMBOL

2Y/B
 .400
 .600
 .800

MAN/MT MACH
 .900 5.220

PARAMETRIC VALUES

ALPHA
 RN/L

CD.000 BETA

.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

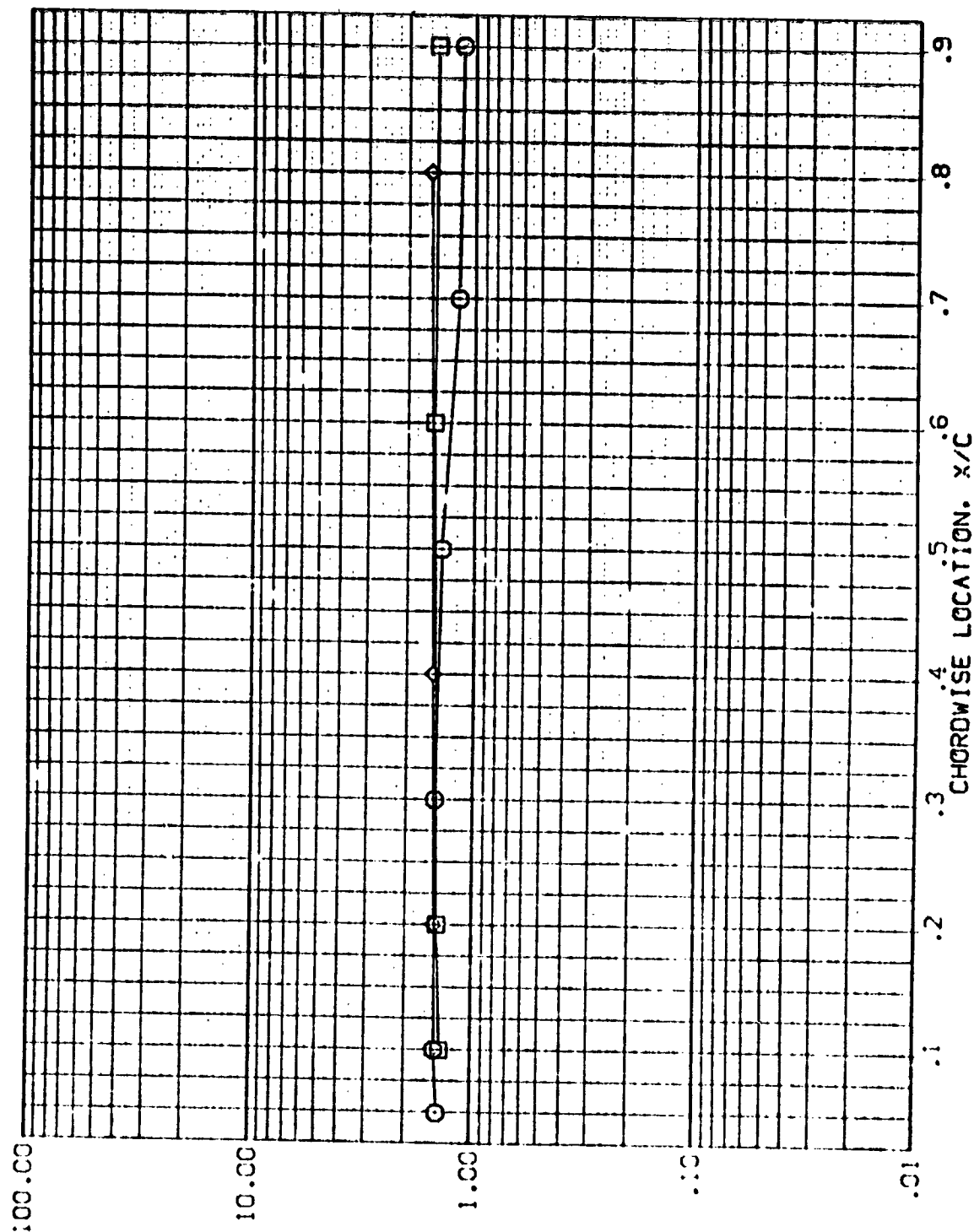


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF04)

SYMBOL 2V/B HAW/HT MACH
 .400 .900 5.219
 .600
 .900

PARAMETRIC VALUES
 ALPHA 90.000 BETA .000
 RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

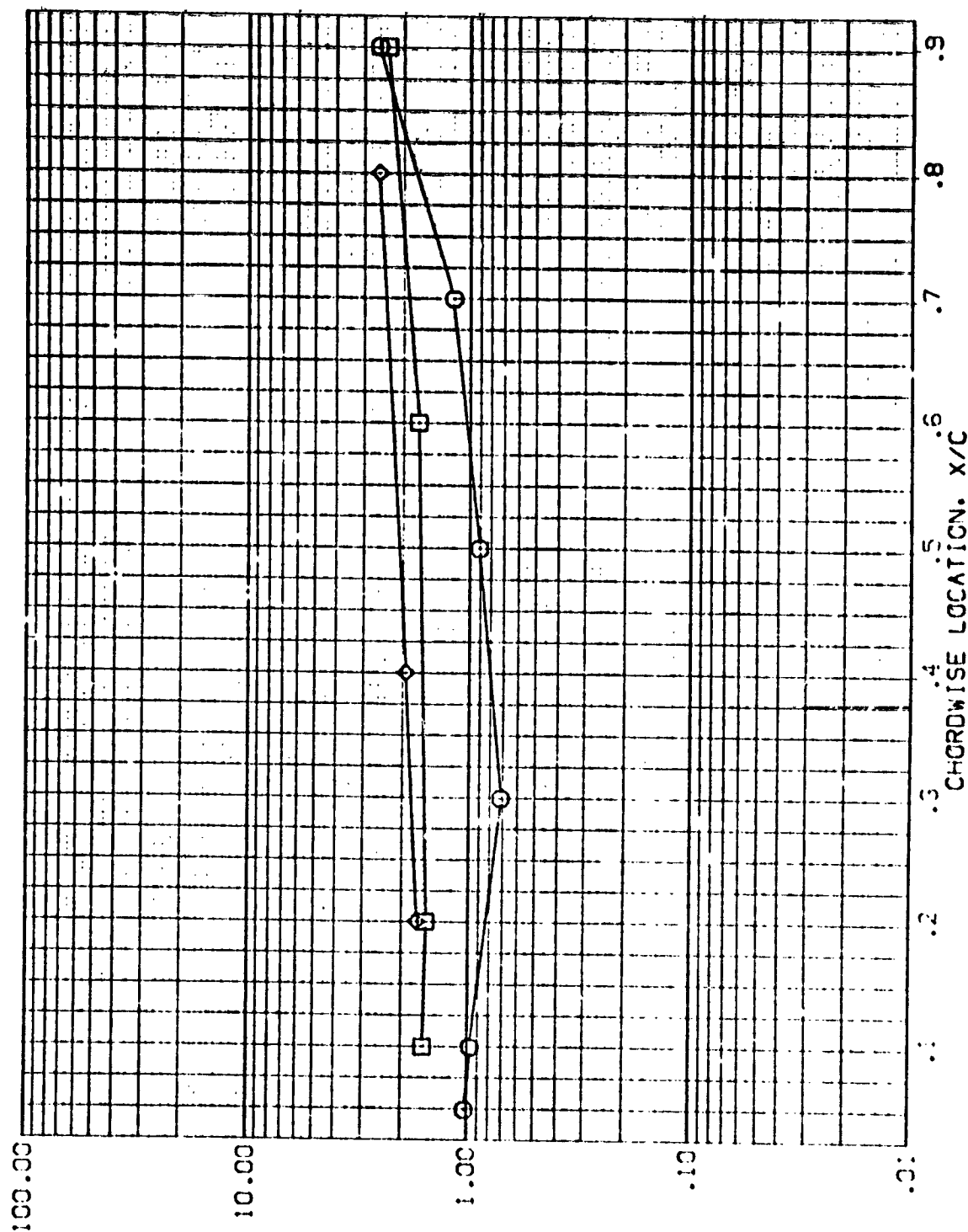


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 C1+T1 WING LOWER SURFACE (BEVF05)

SYMBOL	2V/B	HAW/HT	MACH	PARAMETRIC VALUES
□	.400	.900	5.220	ALPHA 120.000
□	.600			BETA 1.000
◇	.800			

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

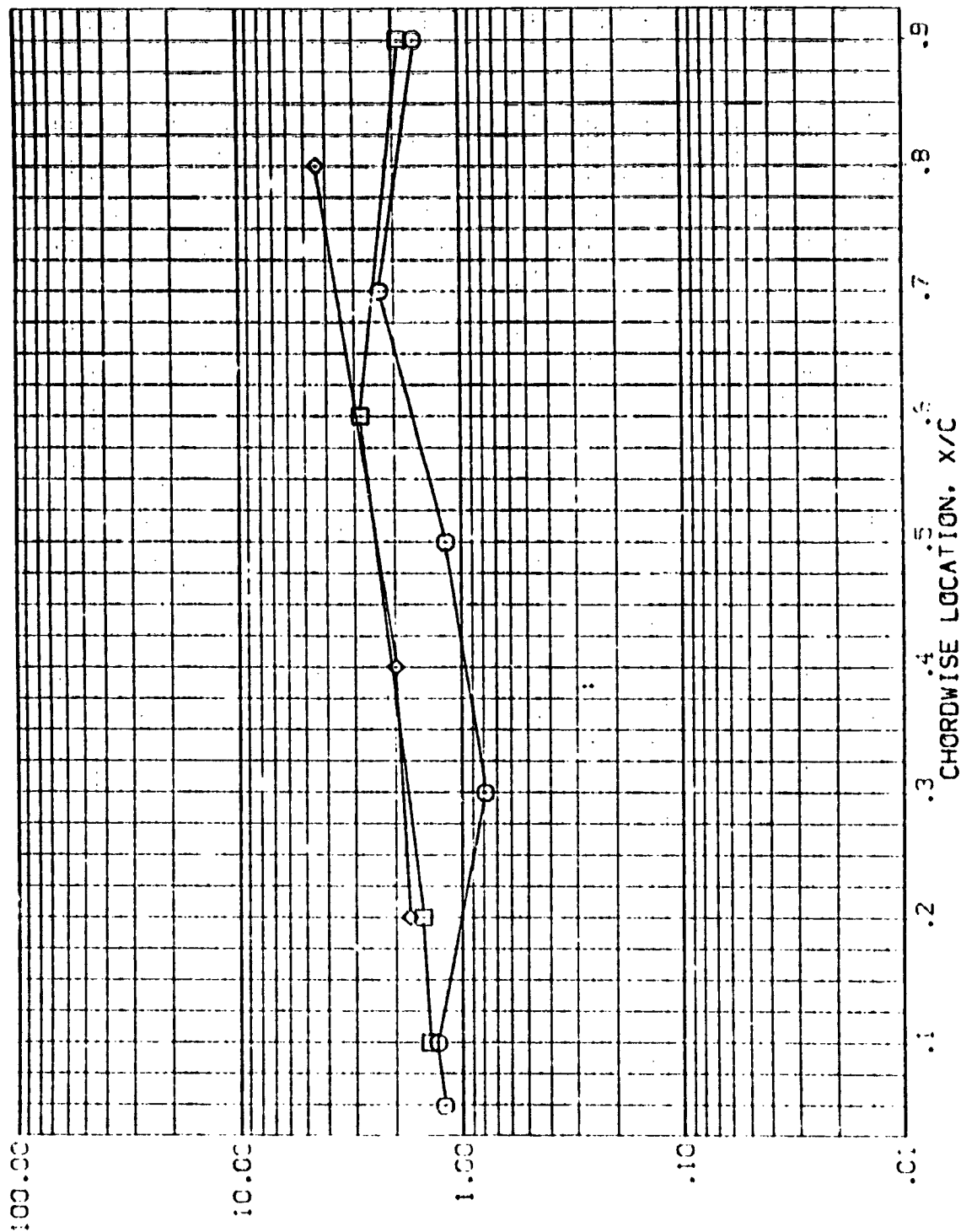


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF06)

SYMBOL \diamond
 \square
 \circ

2Y/B .400
 .600
 .800

HAW/HT .900

MACH 5.220

PARAMETRIC VALUES
 ALPHA -120.000
 RV/L 1.000
 BETA .000

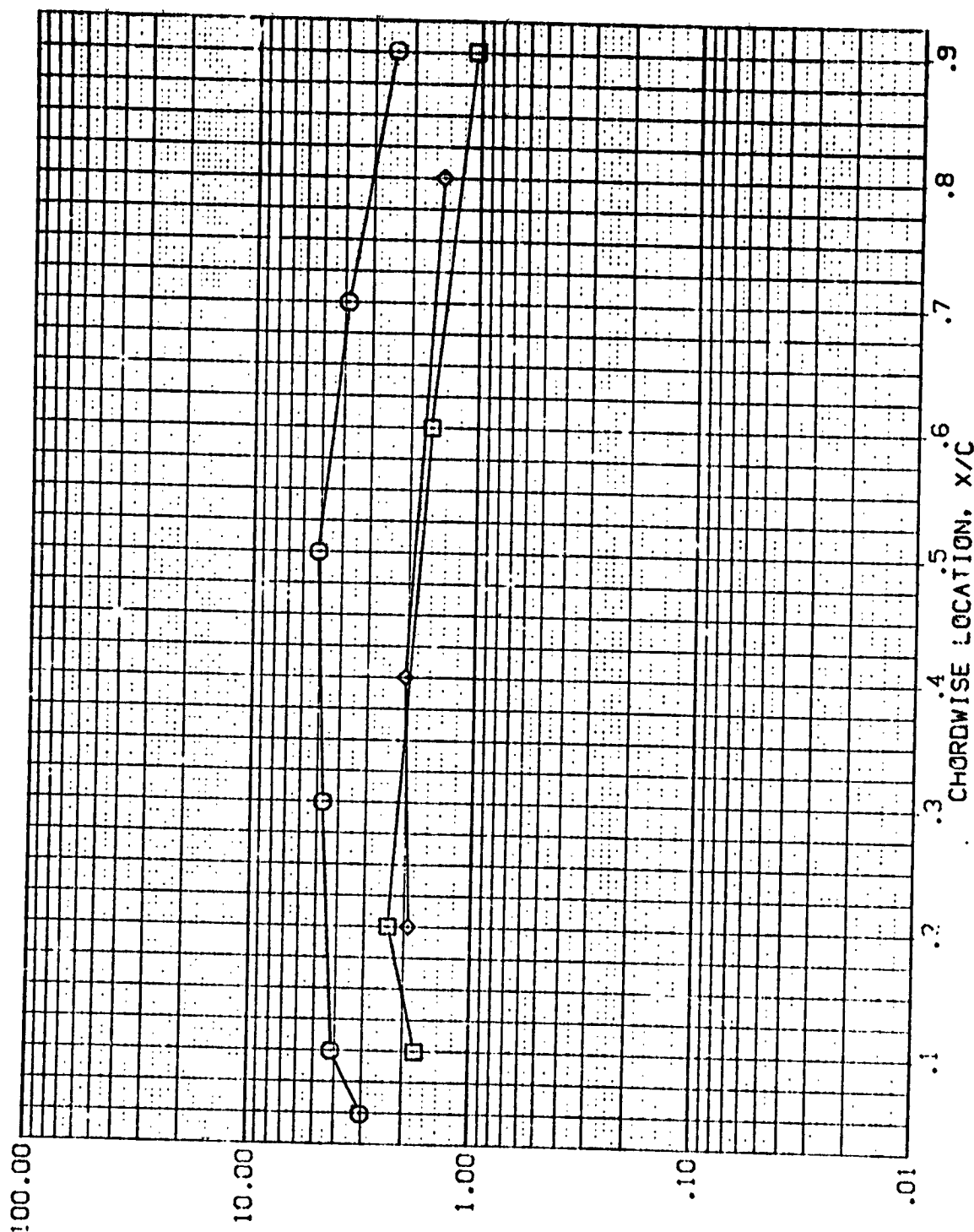


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF07)

SYMBOL	2Y/B	HAW/HT	MACH	PARAMETRIC VALUES
◇	.400	.900	5.219	ALPHA
□	.500			BN/L
◇	.800			BETA
				1.000
				.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

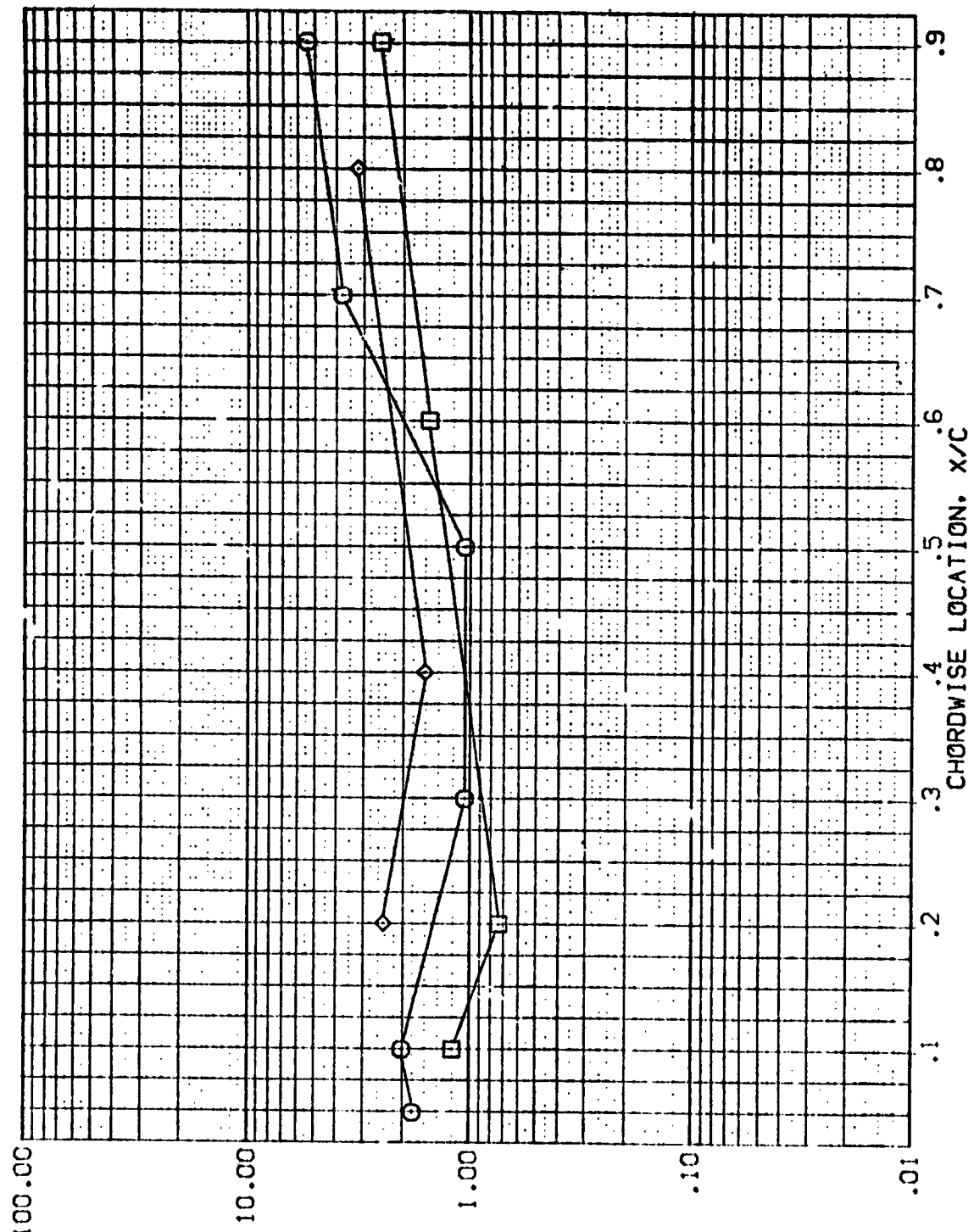


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE

(3EVF08)

SYMBOL

2Y/B

HAH/HT

MACH

ALPHA

RN/L

BETA

PARAMETRIC VALUES

-50.000

1.000

.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

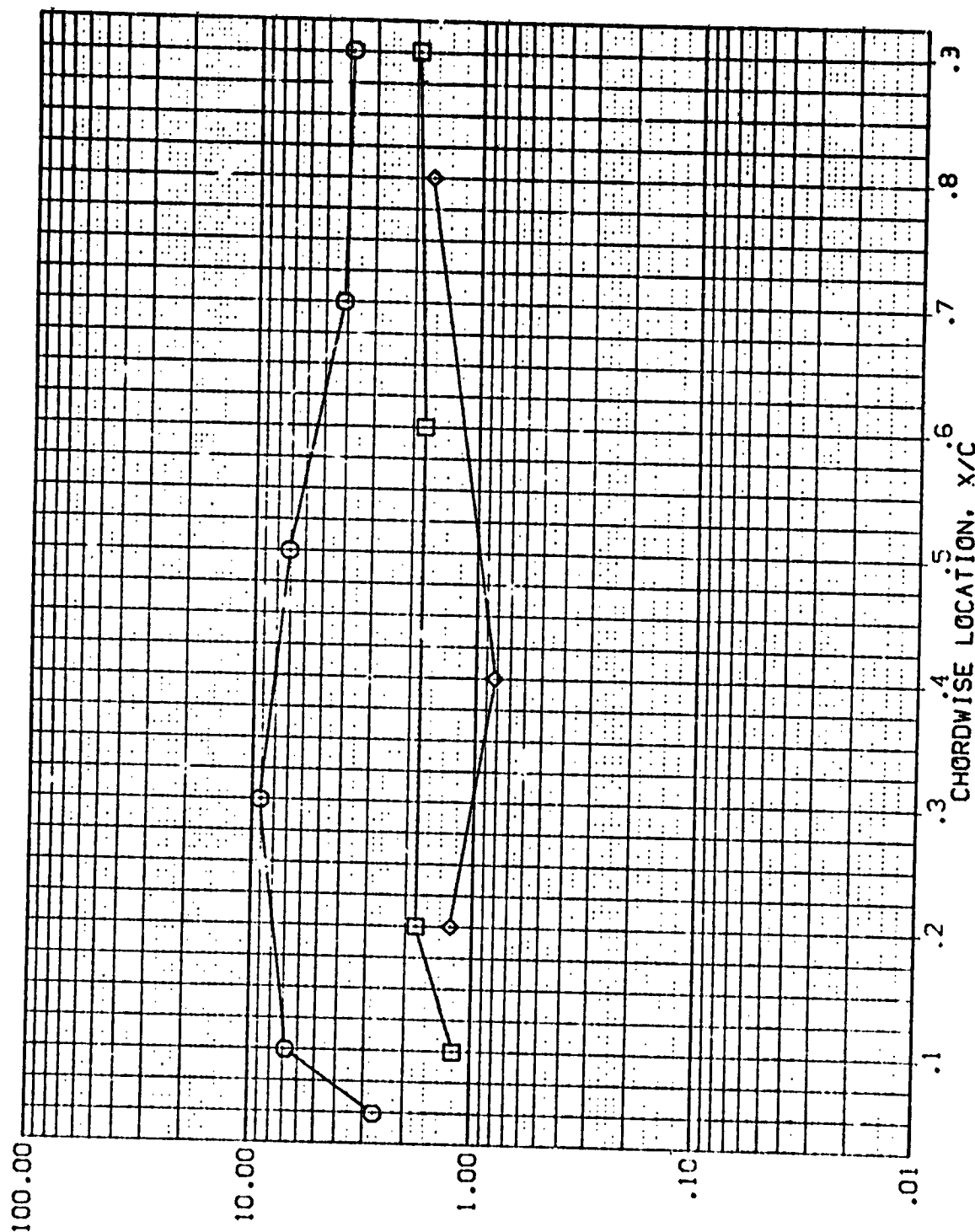


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

(BEVF09)

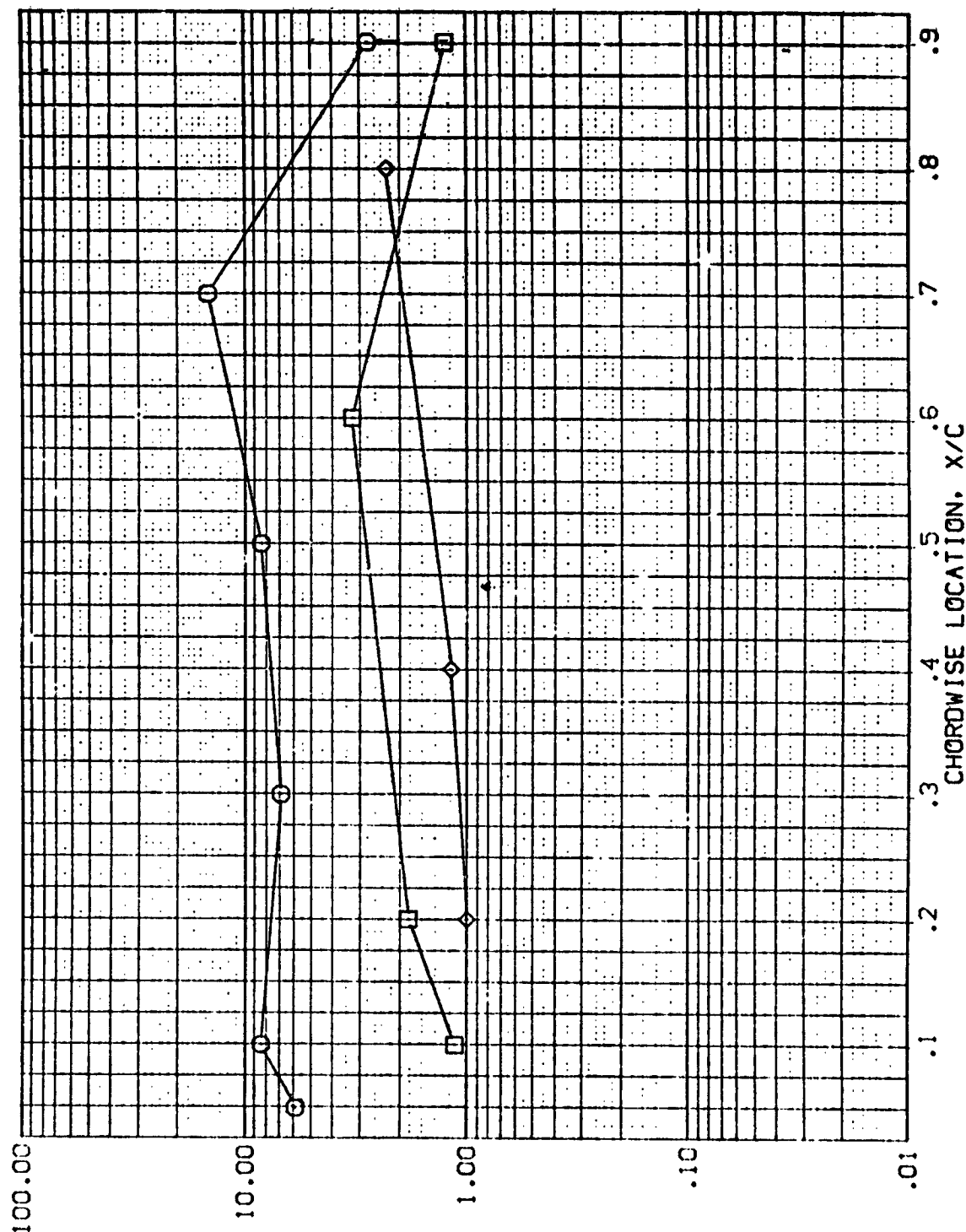
Symptoms

2Y/B
.400
.600
.800

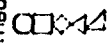
HAW/HT	MACH
.900	5.220

ALPHA	PARAMETRIC VALUES	
RN/L	-30.000	BETA
	1.000	

000.



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DATA SET SYMBOL:  CONFIGURATION DESCRIPTION: AMES 3.5-195 1/28 01+11 WING LOWER SURFACE, AMES 3.5-195 1/28 01+11 WING LOWER SURFACE, AMES 3.5-195 1/28 01+11 WING LOWER SURFACE, AMES 3.5-195 1/28 01+11 WING LOWER SURFACE, AMES 3.5-195 1/28 01+11 WING LOWER SURFACE

ALPHA	BETA	RN/L
.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
80.000	.000	1.000
120.000	.000	1.000

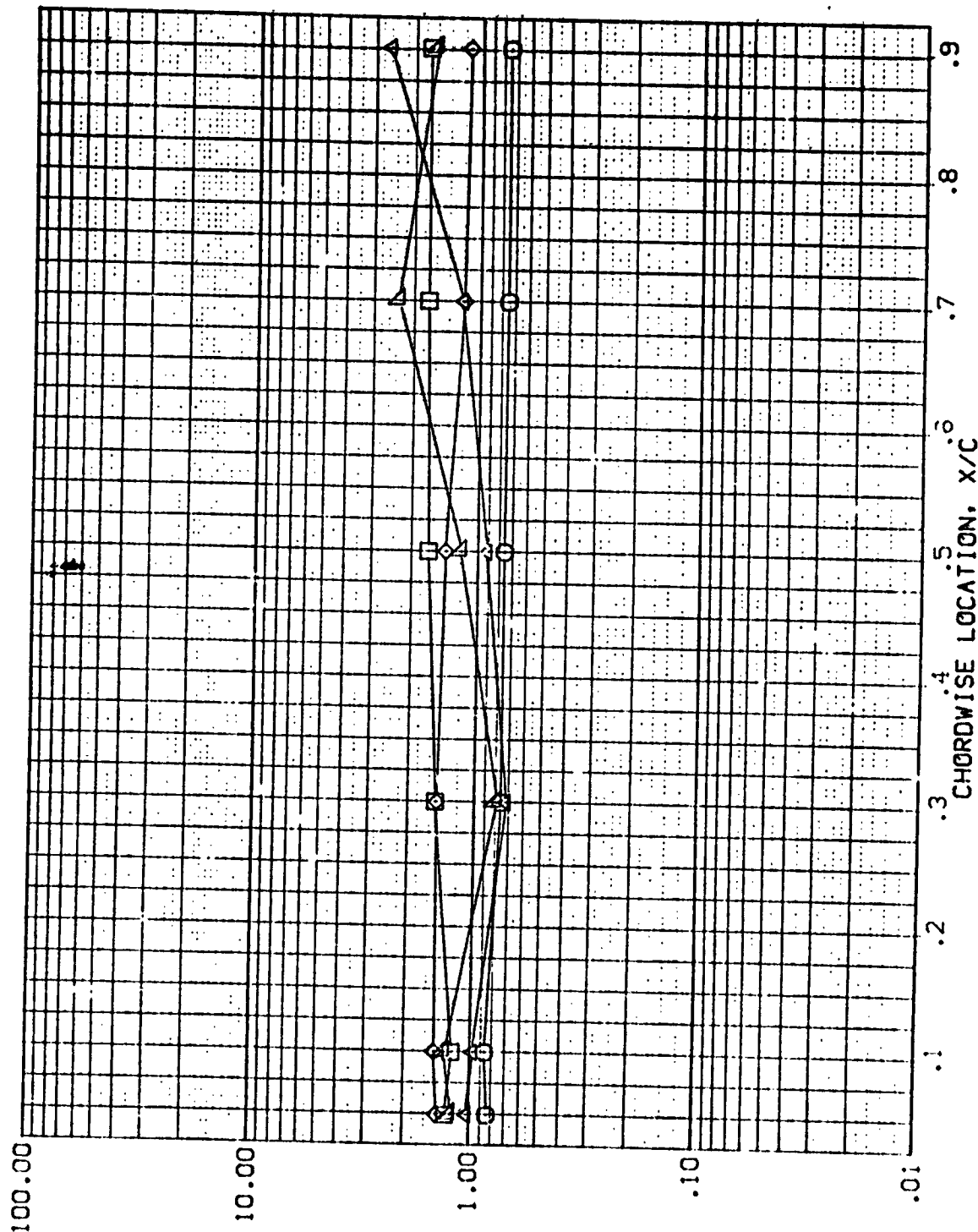


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RM/L
(BEVFO1)	AMES 3.5-195 IH28 01+11 WING LOWER SURFACE	.000	.000	1.000
(BEVFO2)	AMES 3.5-195 IH28 01+11 WING LOWER SURFACE	36.000	.000	1.000
(BEVFO3)	AMES 3.5-195 IH28 01+11 WING LOWER SURFACE	60.000	.000	1.000
(BEVFO4)	AMES 3.5-195 IH28 01+11 WING LOWER SURFACE	90.000	.000	1.000
(BEVFO5)	AMES 3.5-195 IH28 01+11 WING LOWER SURFACE	120.000	.000	1.000

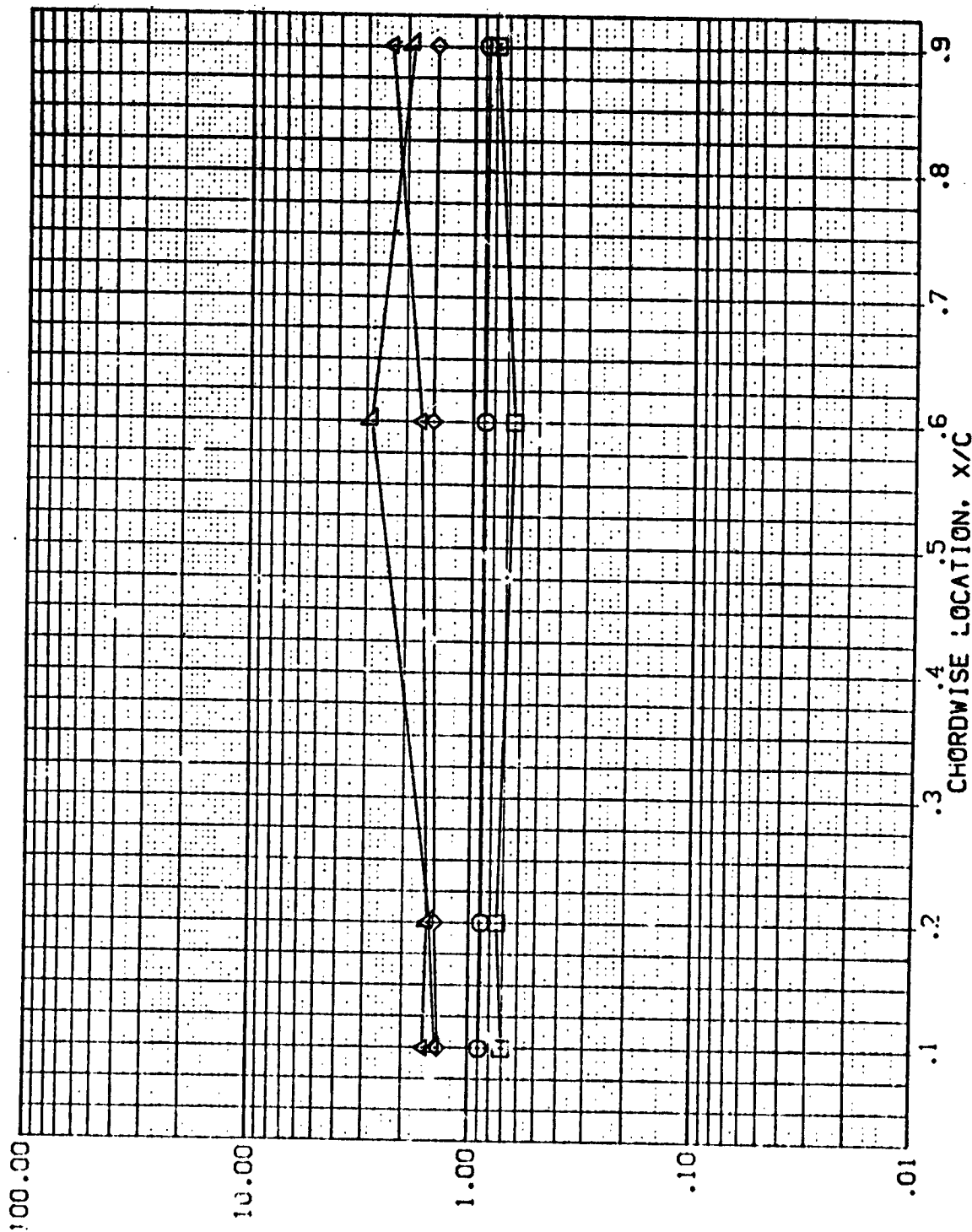


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, H_1/H_0 $MA_{\infty} = 5.300$ $HAW/HT = .900$ $2Y/B = 600$ $Re_{\infty} = 914$

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA BETA RN/L

(BEVFO1)	AMES 3.5-195 I-28 C1+T1 WING LOWER SURFACE	.000	.000	1.000
(BEVFO2)	AMES 3.5-195 I-28 C1+T1 WING LOWER SURFACE	30.000	.000	1.000
(BEVFO3)	AMES 3.5-195 I-28 C1+T1 WING LOWER SURFACE	60.000	.000	1.000
(BEVFO4)	AMES 3.5-195 I-28 C1+T1 WING LOWER SURFACE	90.000	.000	1.000
(BEVFO5)	AMES 3.5-195 I-28 C1+T1 WING LOWER SURFACE	120.000	.000	1.000

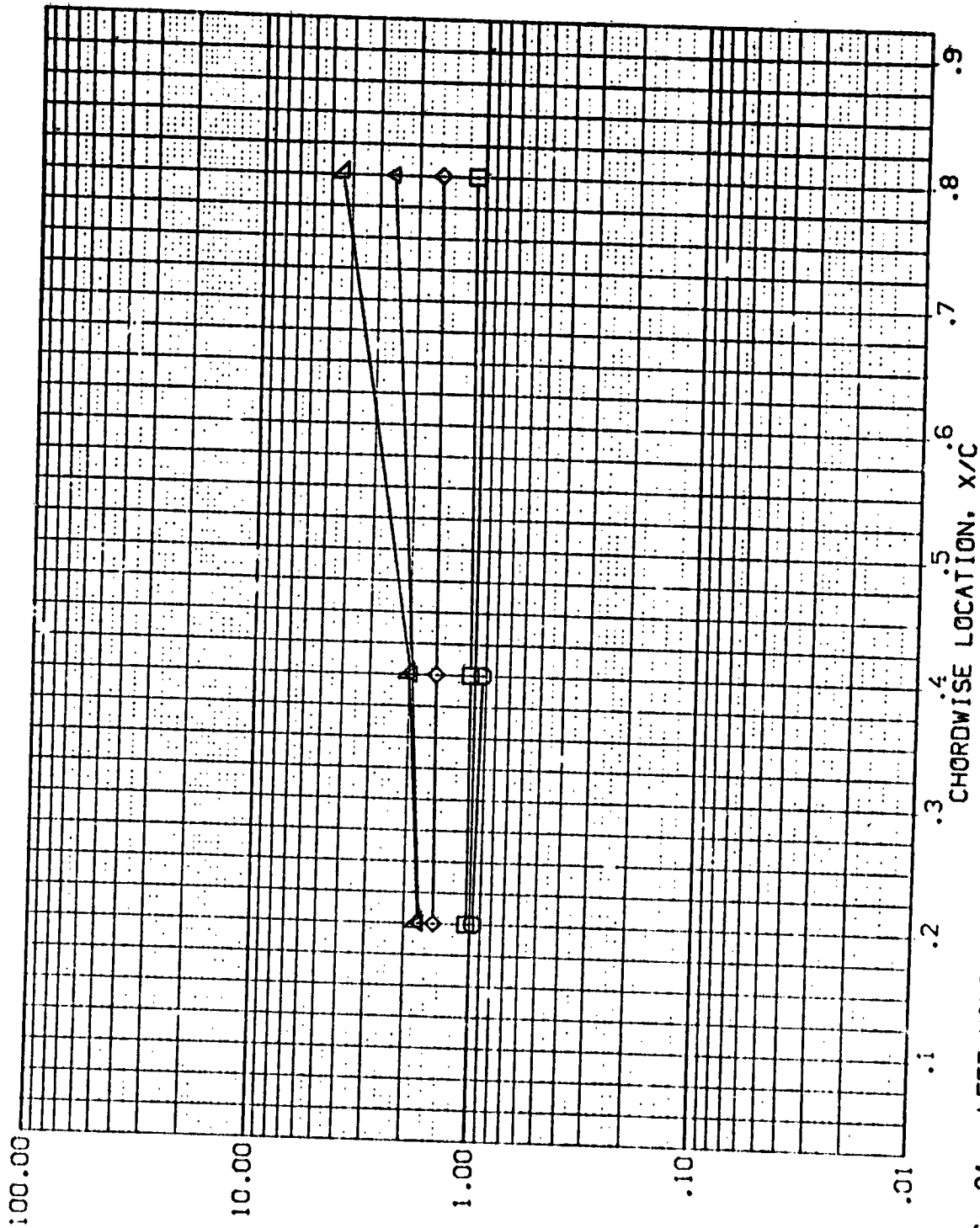


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, H_I/H_U

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RNA/L
(BEVF01)	AMES 3.5-195 H28 01+11 WING LOWER SURFACE	.000	.000	1.000
(BEVF03)	AMES 3.5-195 H28 01+11 WING LOWER SURFACE	-30.000	.000	1.000
(BEVF08)	AMES 3.5-195 H28 01+11 WING LOWER SURFACE	-60.000	.000	1.000
(BEVF07)	AMES 3.5-195 H28 01+11 WING LOWER SURFACE	-90.000	.000	1.000
(BEVF06)	AMES 3.5-195 H28 01+11 WING LOWER SURFACE	-120.000	.000	1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

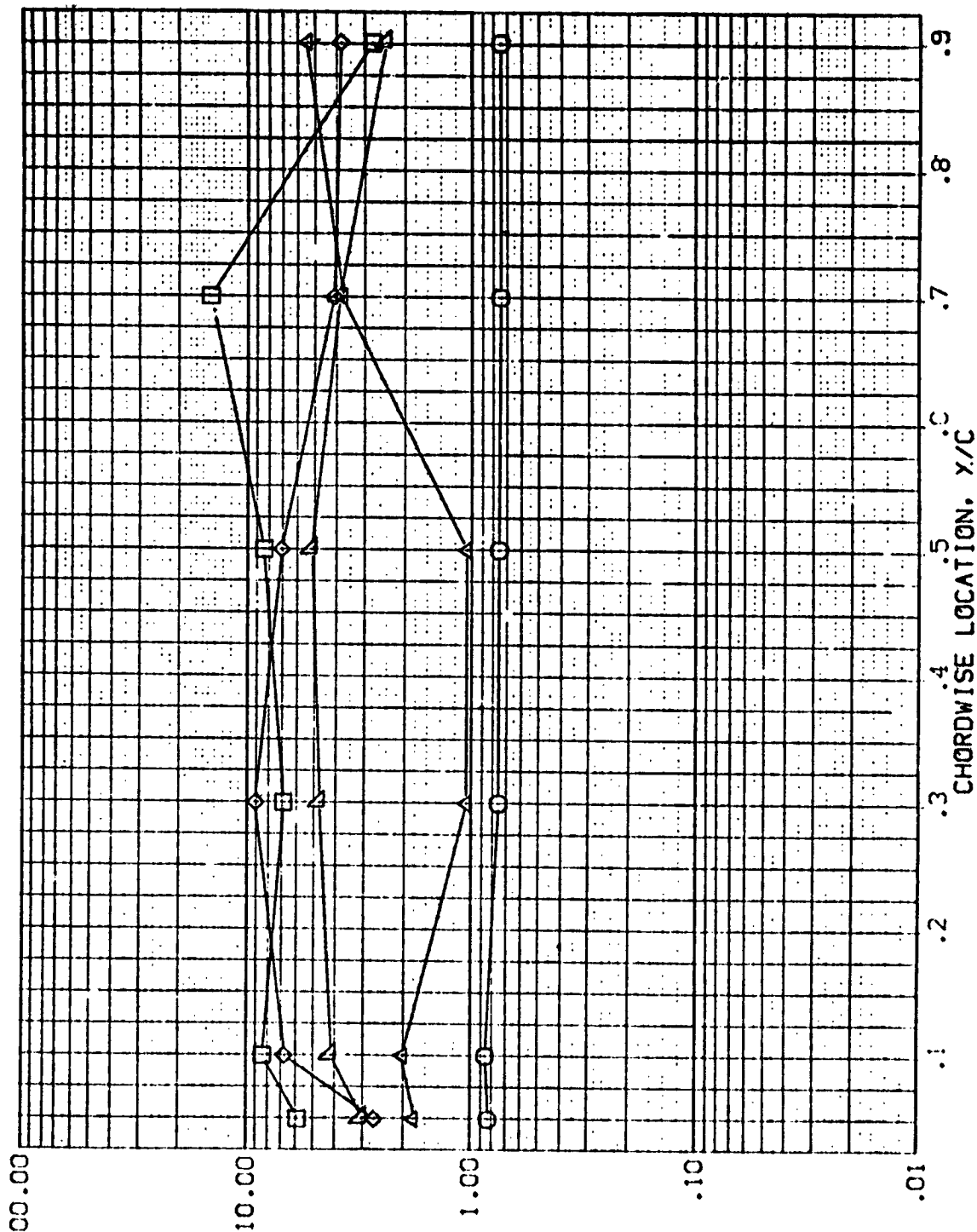


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

$MA_{\infty} = 5.300$ $HA_{\infty}/HT = .900$ $2Y/B = .400$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RV/L
(BEVFO1)	AMES 3.5-195 (H28 C1+T) WING LOWER SURFACE	.000	.000	1.000
(BEVFO9)	AMES 3.5-195 (H28 C1+T) WING LOWER SURFACE	-30.000	.000	1.000
(BEVFO8)	AMES 3.5-195 (H28 C1+T) WING LOWER SURFACE	-60.000	.000	1.000
(BEVFO7)	AMES 3.5-195 (H29 C1+T) WING LOWER SURFACE	-90.000	.000	1.000
(BEVFO6)	AMES 3.5-195 (H28 C1+T) WING LOWER SURFACE	-120.000	.000	1.000

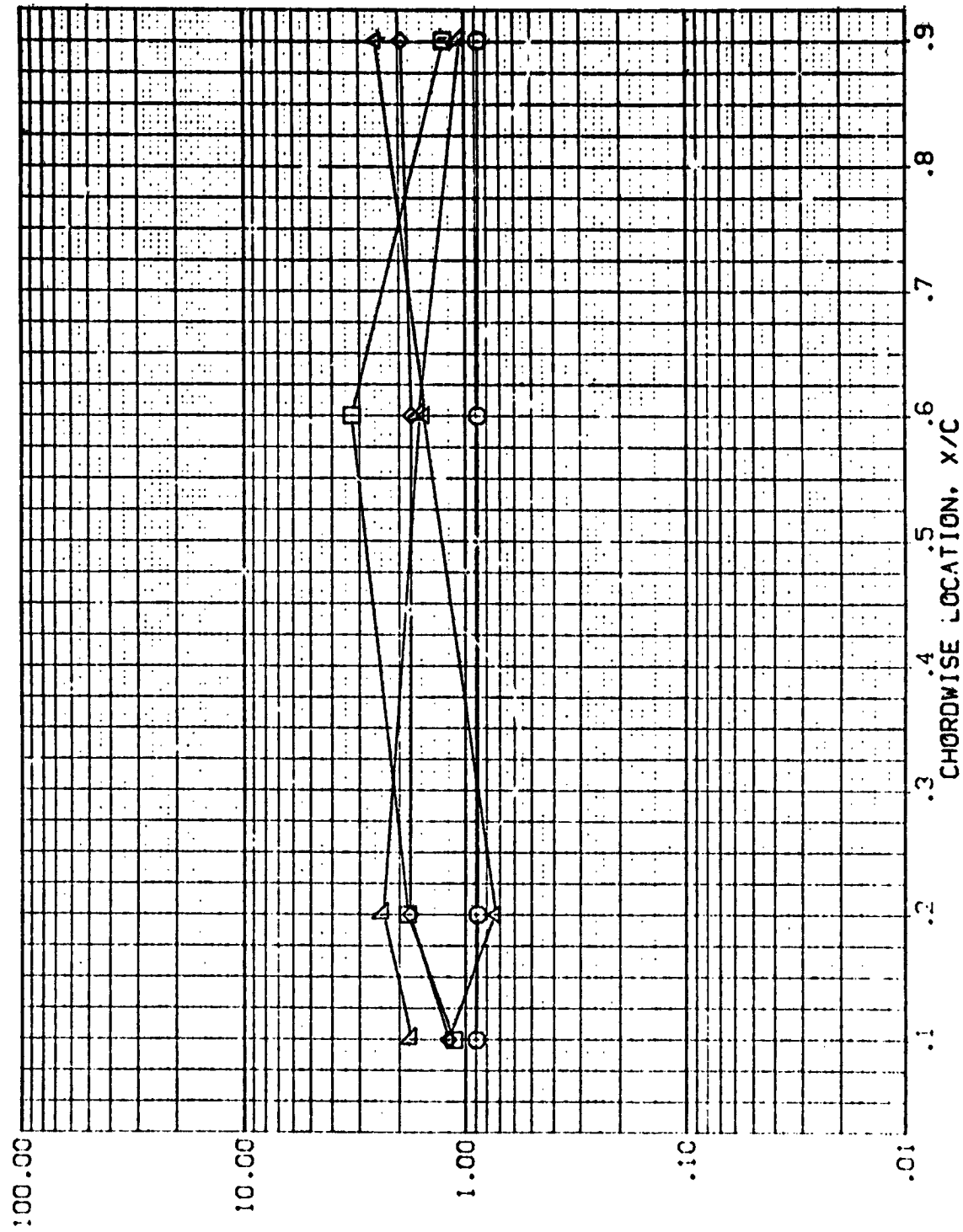


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, H_1/H_0

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BEV01)	AMES 3-5-195	H28 01-T1	WING	LOWER SURFACE
(BEV02)	AMES 3-5-195	H28 01-T1	WING	LOWER SURFACE
(BEV03)	AMES 3-5-195	H28 01-T1	WING	LOWER SURFACE
(BEV04)	AMES 3-5-195	H28 01-T1	WING	LOWER SURFACE
(BEV05)	AMES 3-5-195	H28 01-T1	WING	LOWER SURFACE

ALPHA BETA RW/L

.000	.000	1.000
-30.000	.000	1.000
-60.000	.000	1.000
-90.000	.000	1.000
-120.000	.000	1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT-TRANSFER COEFFICIENTS, h_i/h_u

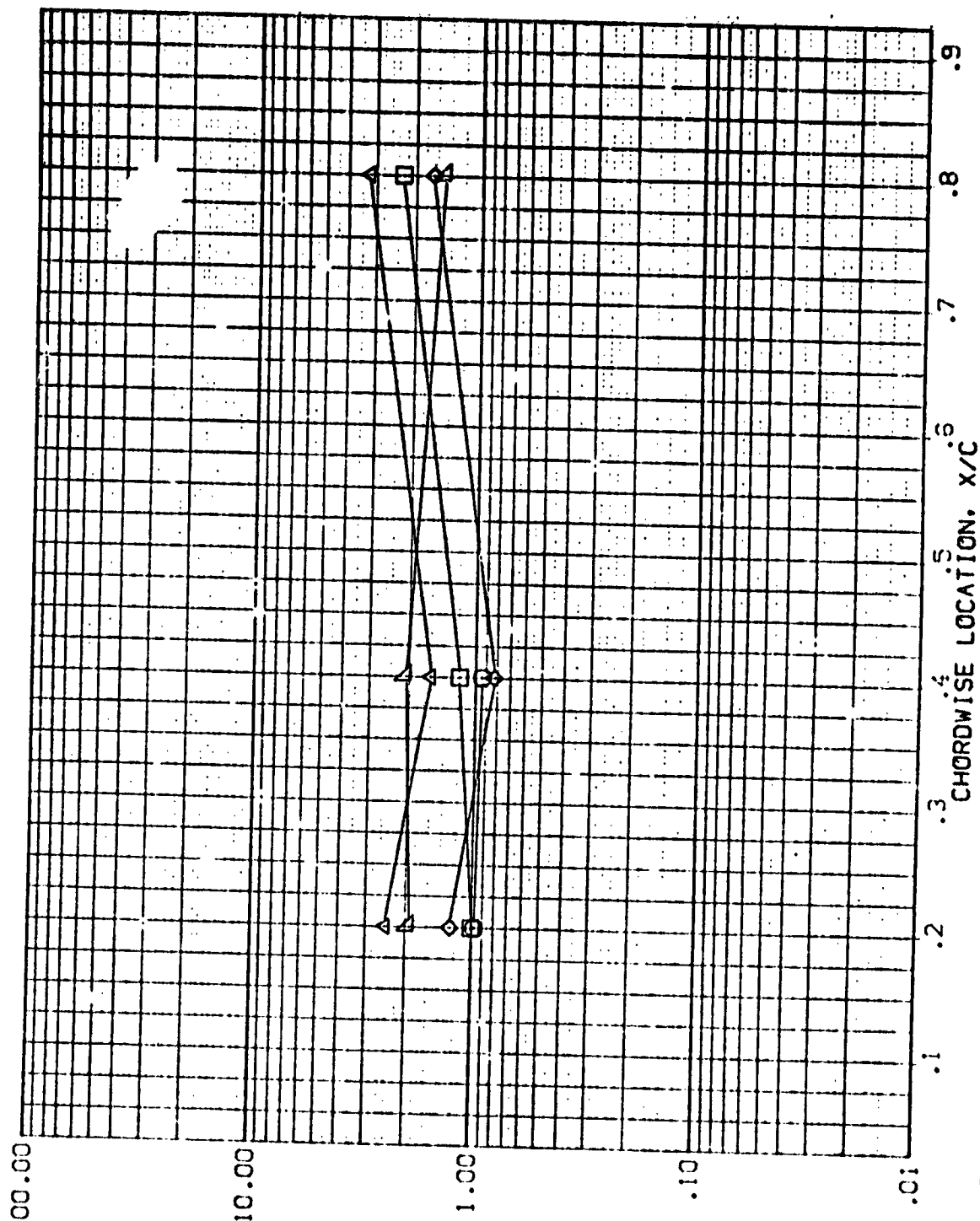


FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

$MACH = 5.300$ $H/W/H_T = .900$ $2Y/B = .300$

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G19)

SYMBOL	MAY/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.400	5.220	.000	.000
□	.900			1.000	
◇	1.000				

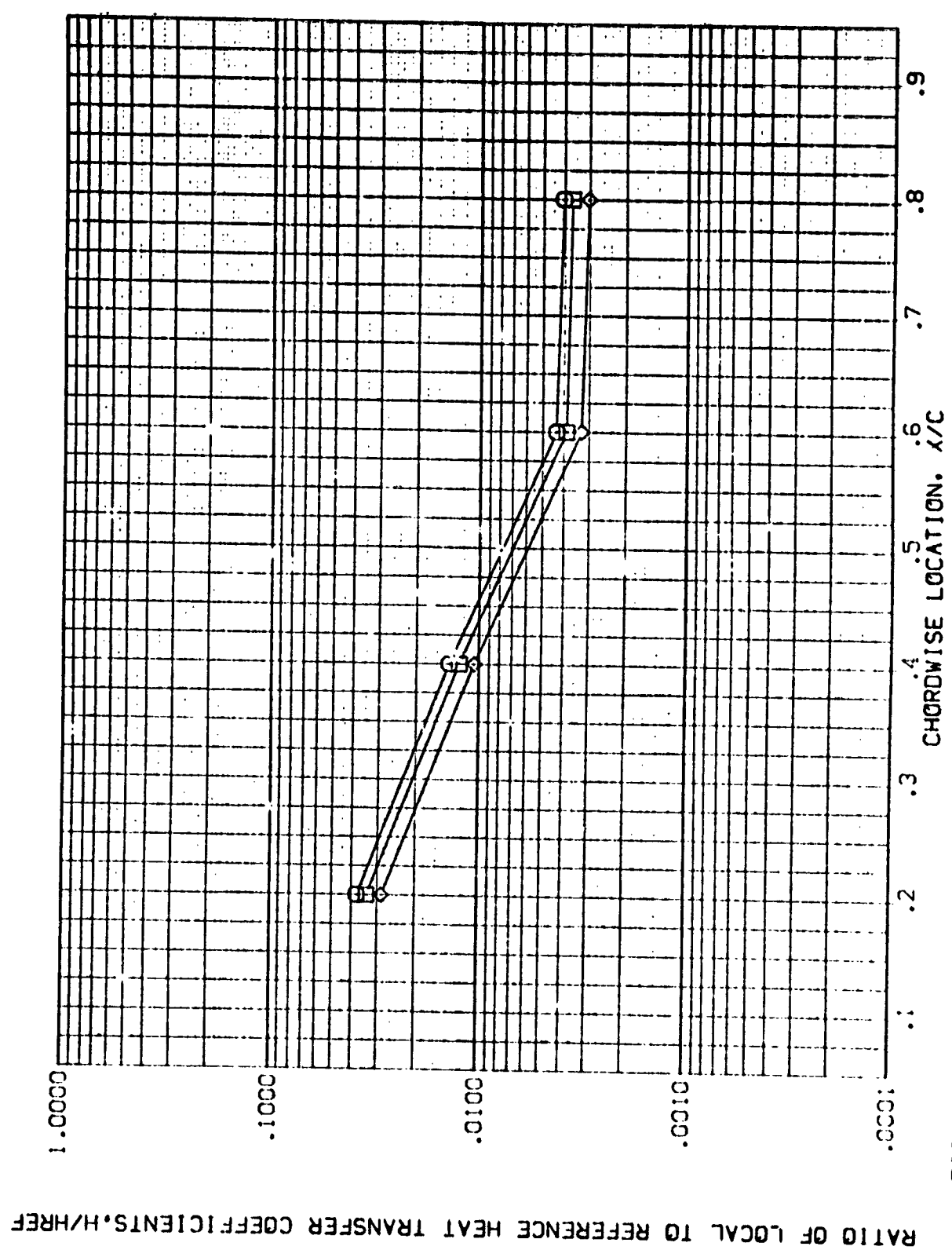


FIG. 22 RIGHT WING UPPER SURFACE. ORBITER ALONE

PARAMETRIC VALUES
ALPHA
RN/A

BETA
1.000

SYNTH HAW/HT 2Y/B MACH
.850 .600 5.220
.900
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

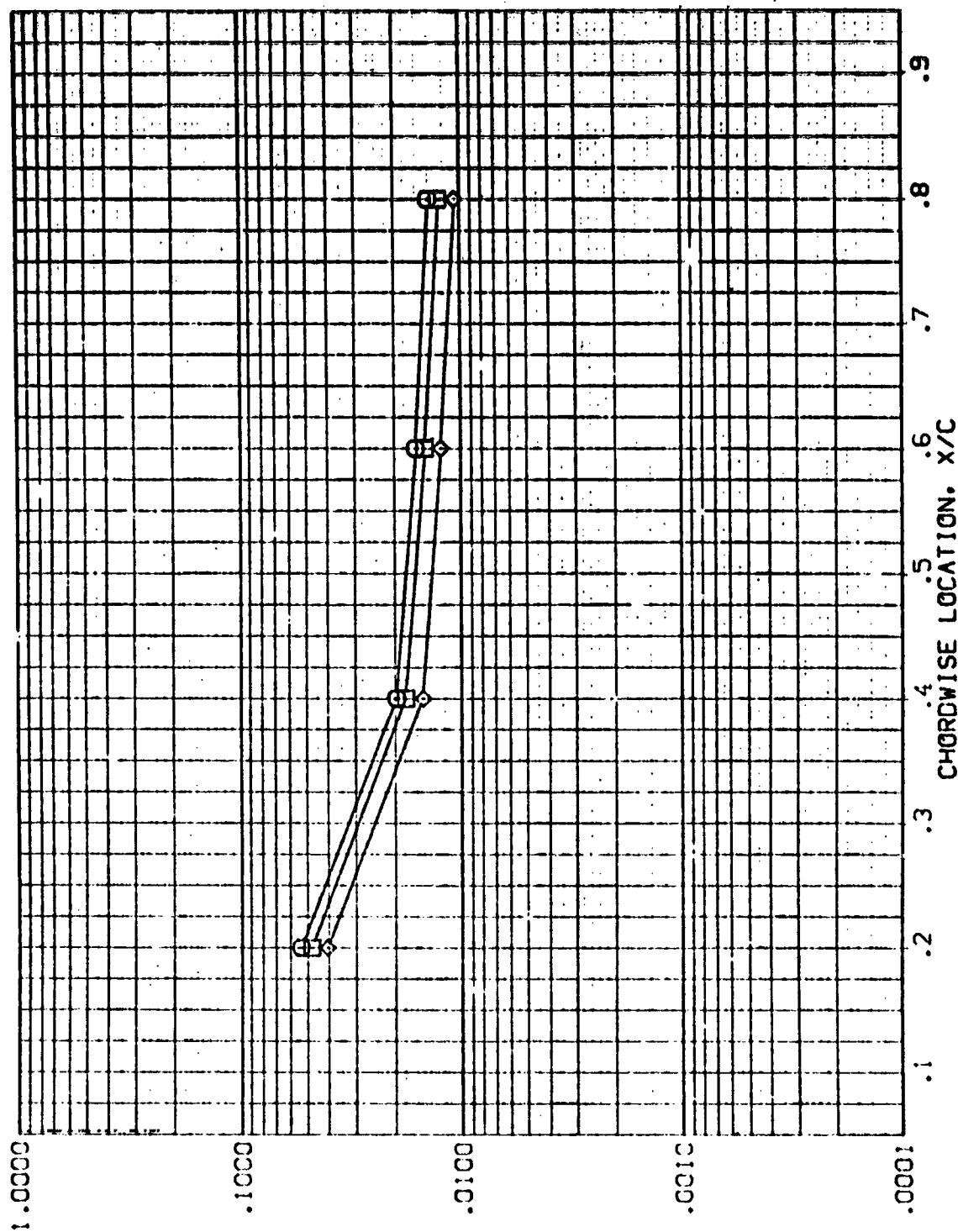


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 C1 WING UPPER SURFACE (REV G1S)

SYNOPSIS
 HAWK/HT .850
 2V/B .800
 MACH 5.220
 .333
 1.000

PARAMETRIC VALUES
 ALPHA .000
 RN/L 1.000
 BETA .000

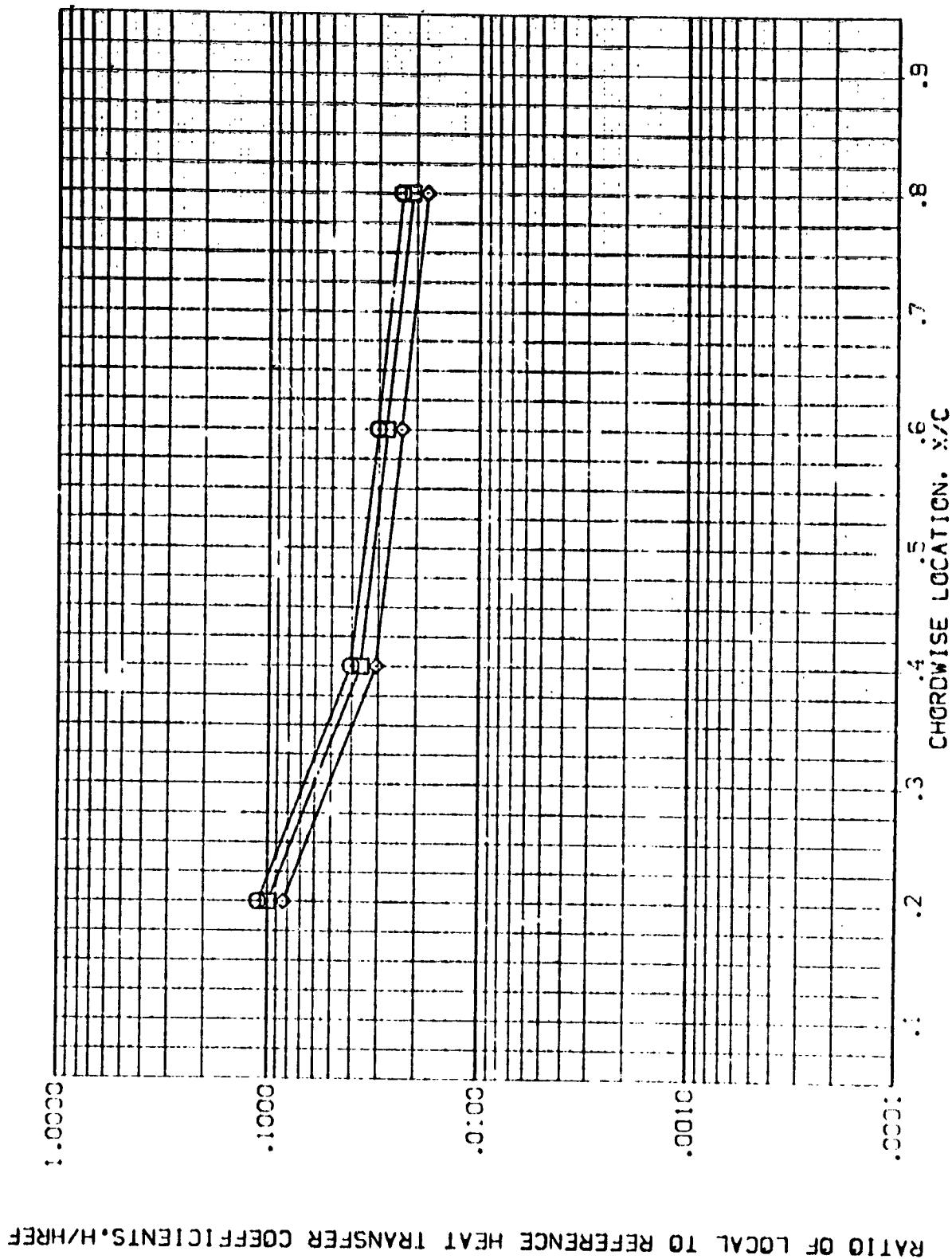


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV620)

SYMBOL \diamond \square \square
 HAW/WT .850 .900 1.000
 2Y/B .400
 MACH 5.219

PARAMETRIC VALUES
 ALPHA 30.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

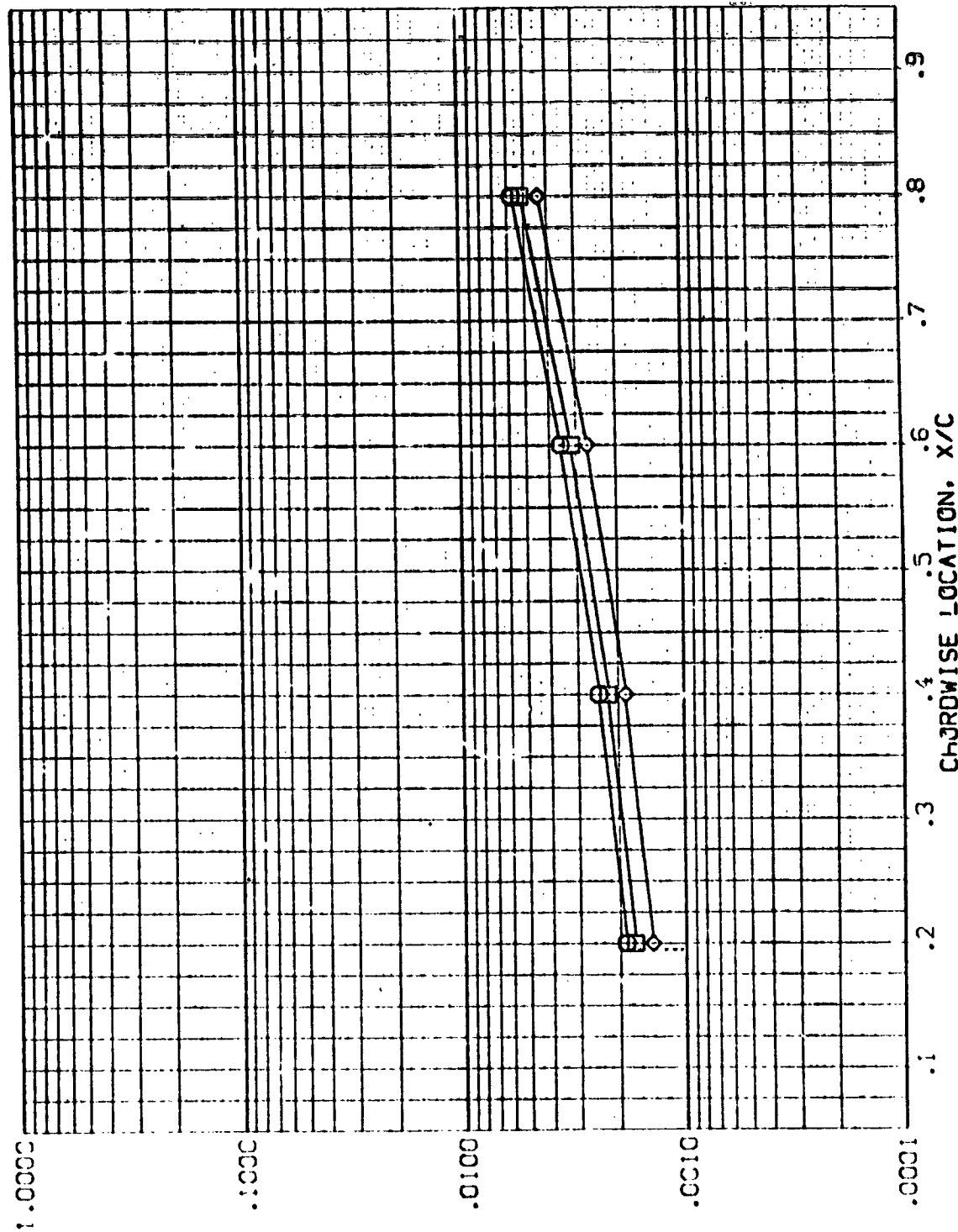


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 1H28 01 WING UPPER SURFACE (REV G20)

SYMBOL	HA#HT	2Y/B	MACH	PARAMETRIC VALUES
□	.850	.600	5.219	ALPHA 30.000
◇	.900			BETA 1.000
	1.000			

.000

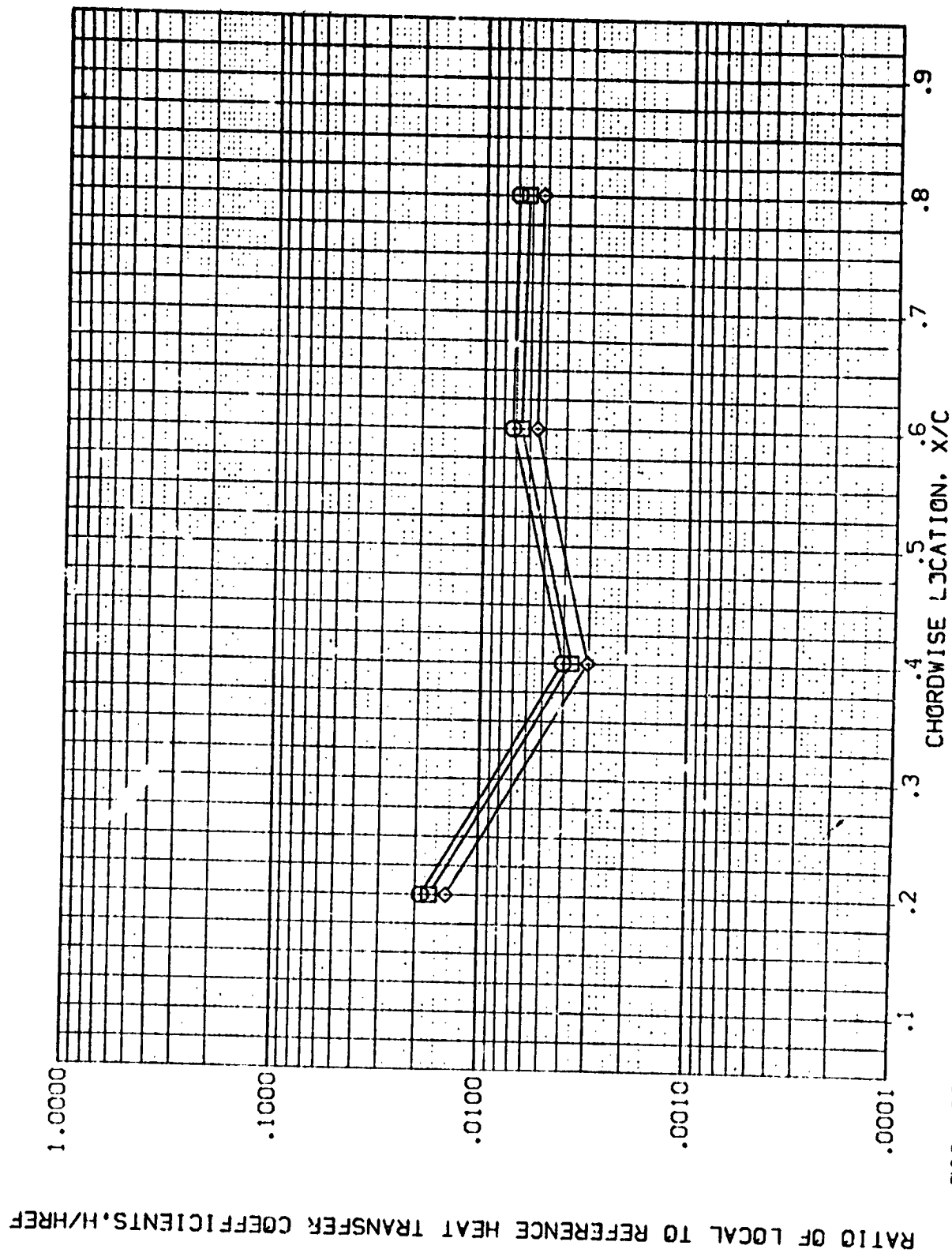


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REV G20)

SYMBOL
□
◇

HAW/HT .850
2Y/B .800
MACH 5.219
.900
1.000

PARAMETRIC VALUES
ALPHA 30.000
RN/L 1.000
BETA .000

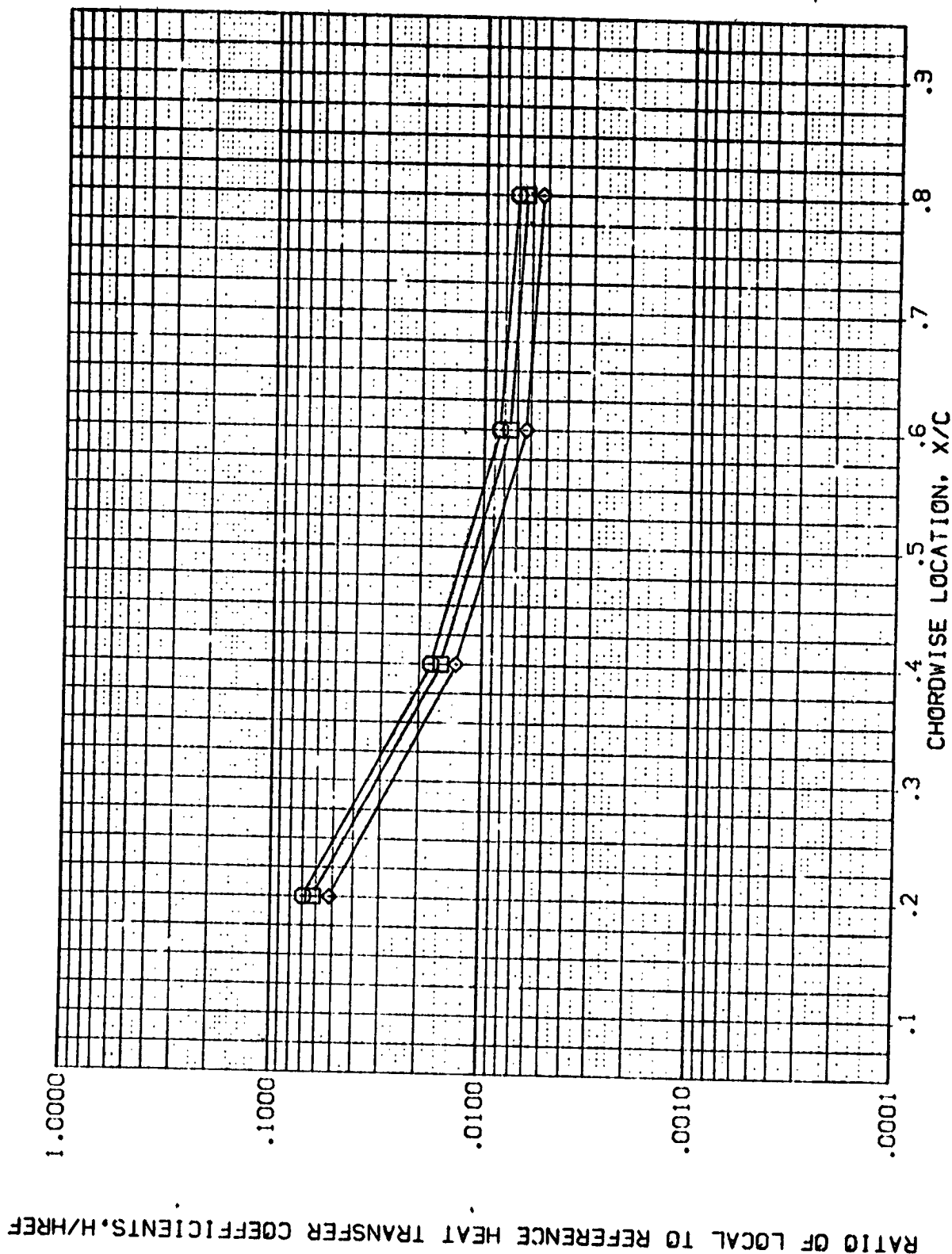


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV621)

PARAMETRIC VALUES
 60.000 BETA
 1.000

ALPHA
 RN/L

SYMBOL HAW/HT Z/B MACH
 .850 .400 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

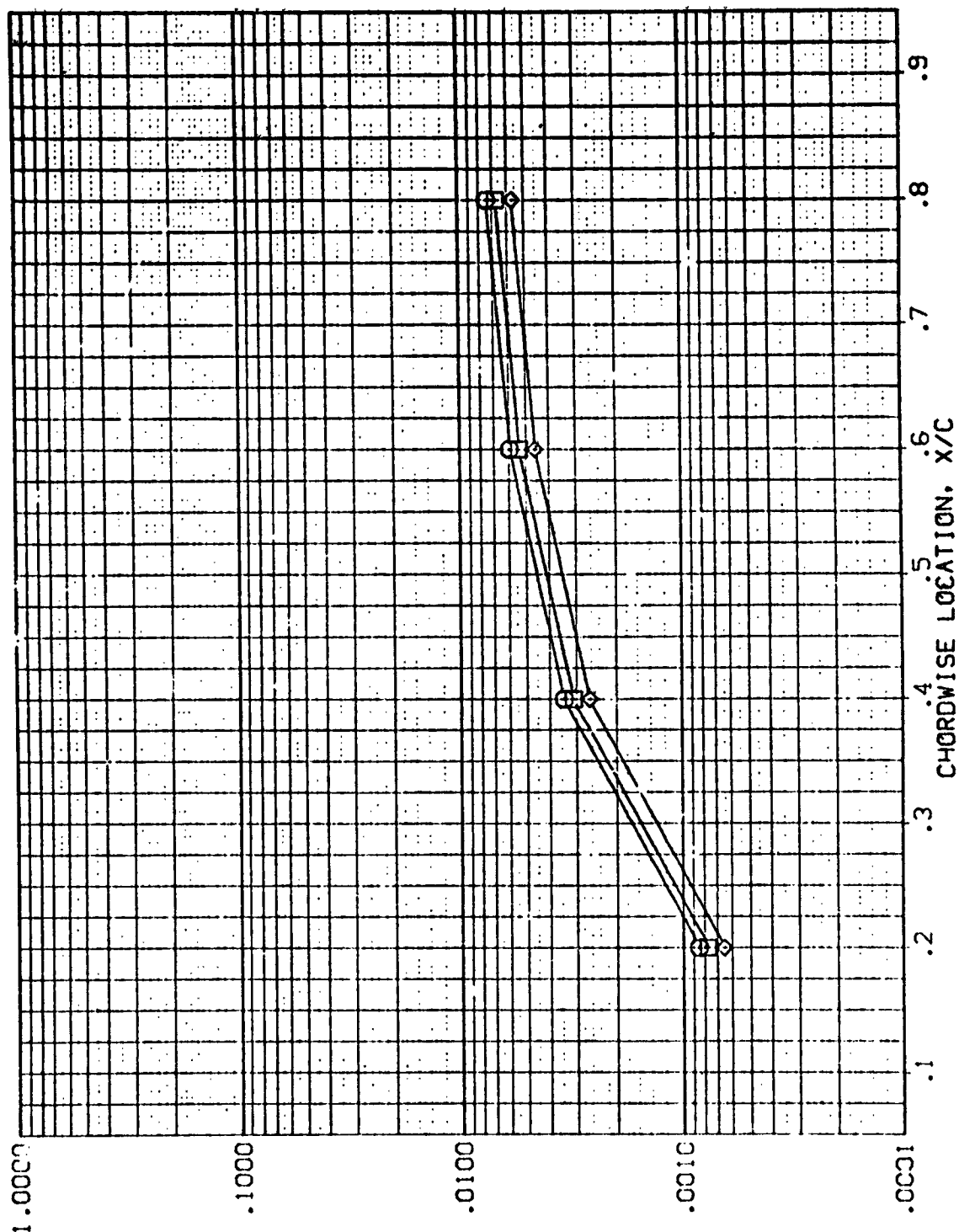


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REV621)

SYMBOL
 \diamond
 \square
 \square

HAW/HT .850
 2Y/B .600
 MACH 5.220
 1.000

PARAMETRIC VALUES
 ALPHA 60.000
 RN/L 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

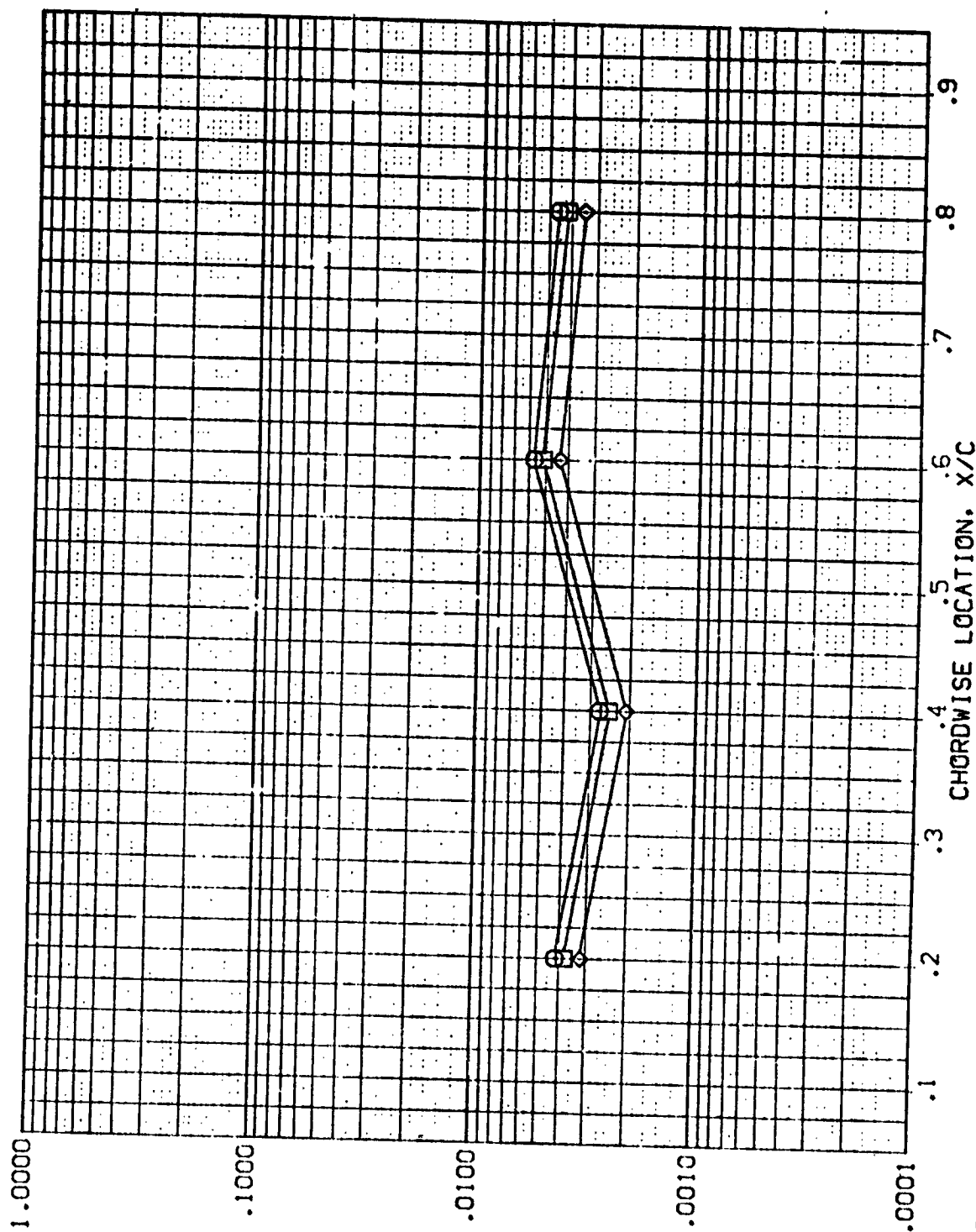


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G21)

SYMBOL	HAW/HT	2Y/B	MACH	ALPHA	BETA
□	.850	.800	5.220	RV/L	
◇	.900				
	1.000				

PARAMETRIC VALUES
 .000
 .000
 1.000

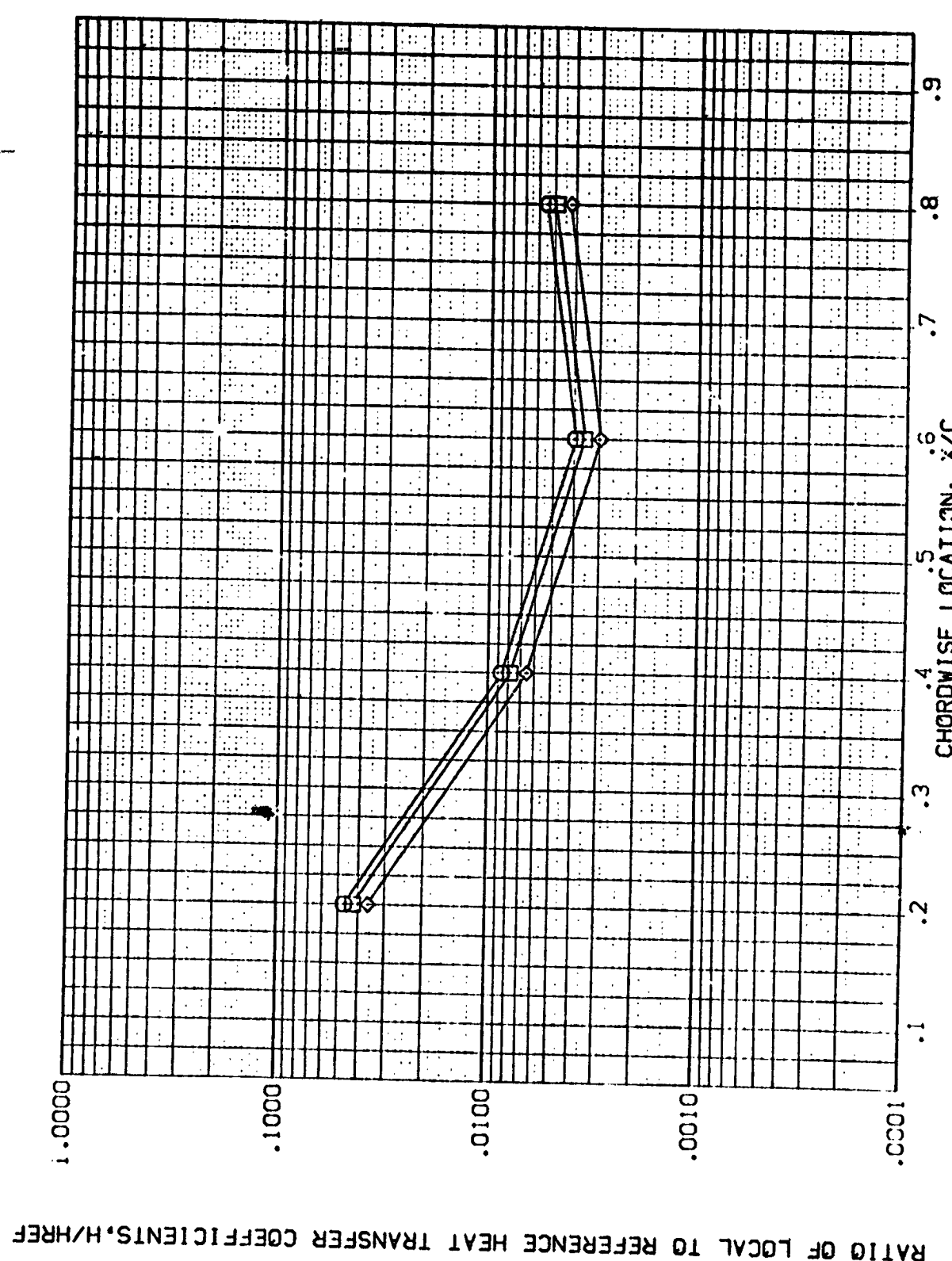


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE.

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REVG22)

SYMBOL

HAIR/HT
.850
.900
1.000

2Y/B
.400

MACH
5.220

PARAMETRIC VALUES

ALPHA
RN/L

90.000
1.000

BETA

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

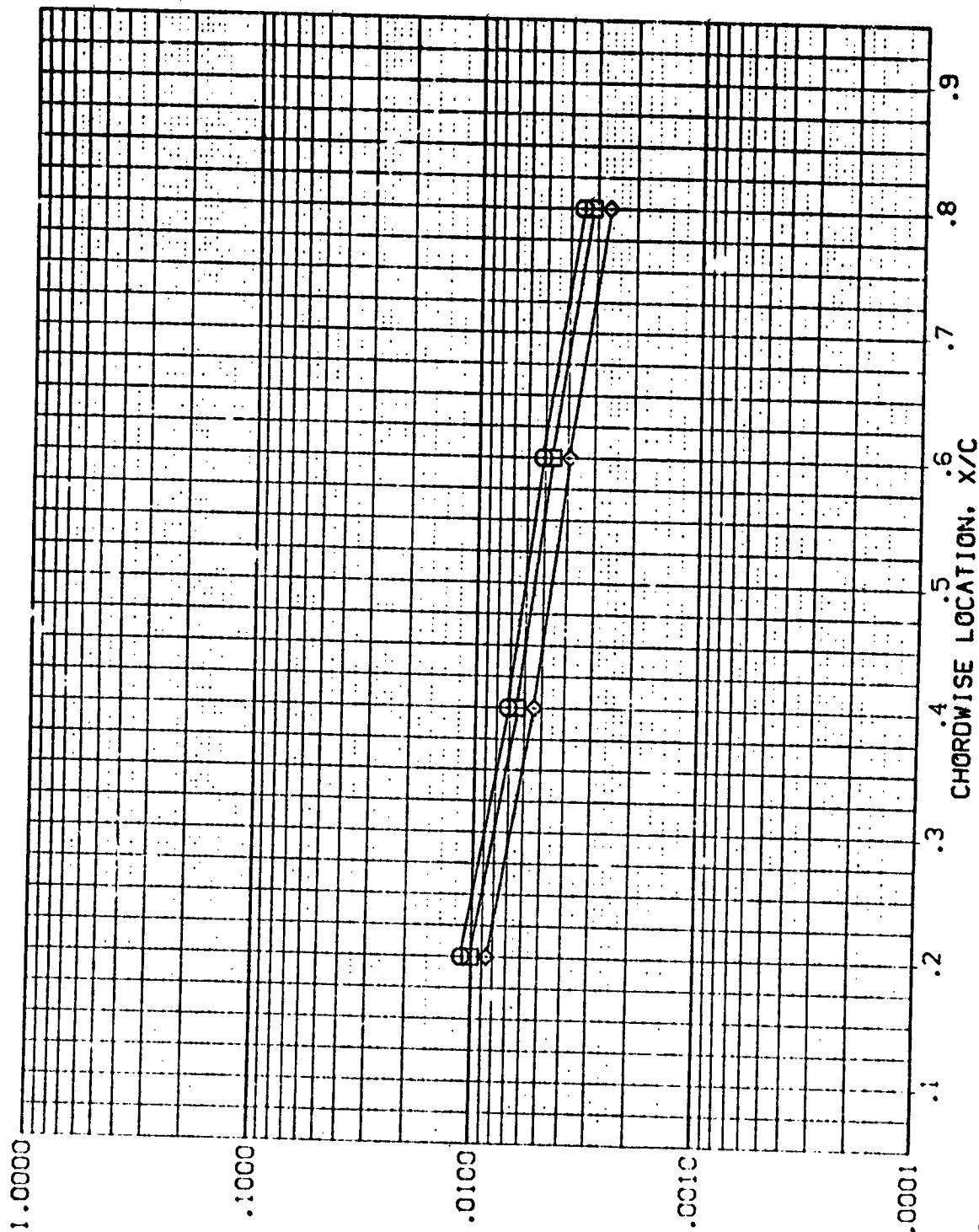


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV322)

PARAMETRIC VALUES
 ALPHA 90.000 BETA .000
 RN/L 1.000

SYMBOL HAW/HT 2Y/B MACH
 .850 .600 5.220
 .900
 1.000

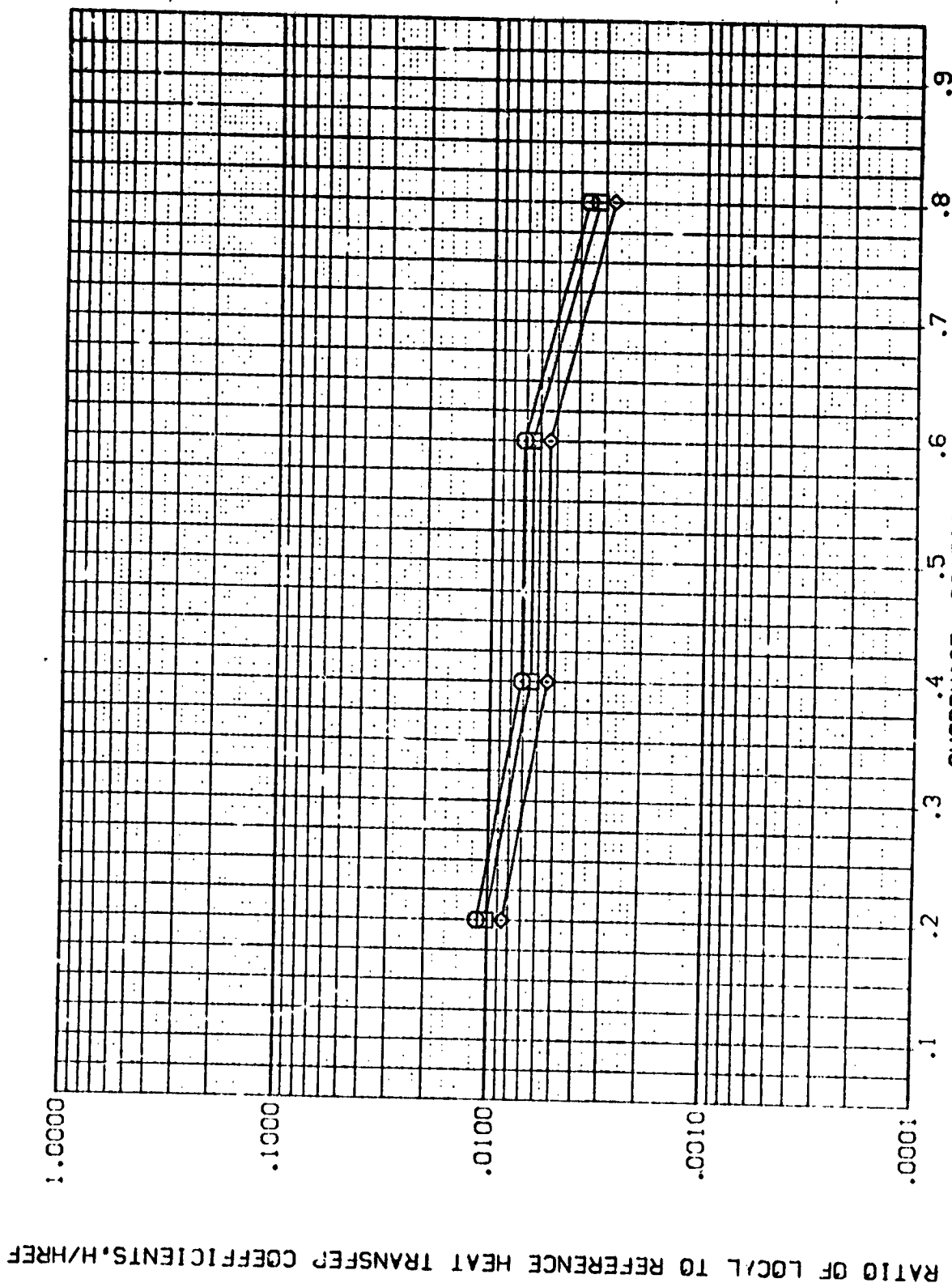


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV622)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

SYMBOL
 \square
 \diamond

HAW/HT .850
 .900
 1.000

2Y/B

MACH 5.220

PARAMETRIC VALUES
 ALPHA ϵ .000
 RN/L 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

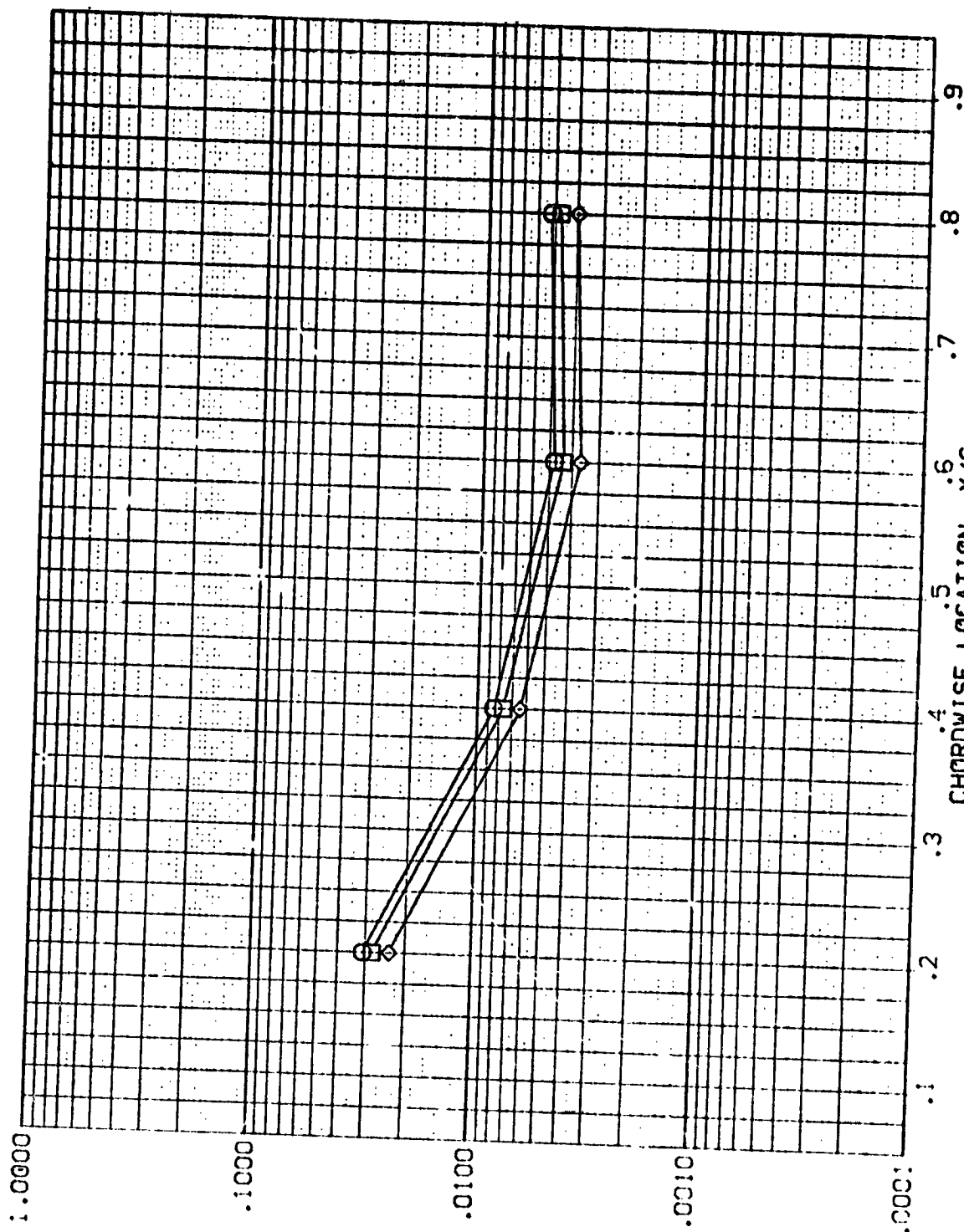


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV23)

SYMBOL	HAW/HT	2% B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
				RN/L	
◇	.850	.400	5.220	120.000	.000
□	.900			1.000	
◇	1.000				

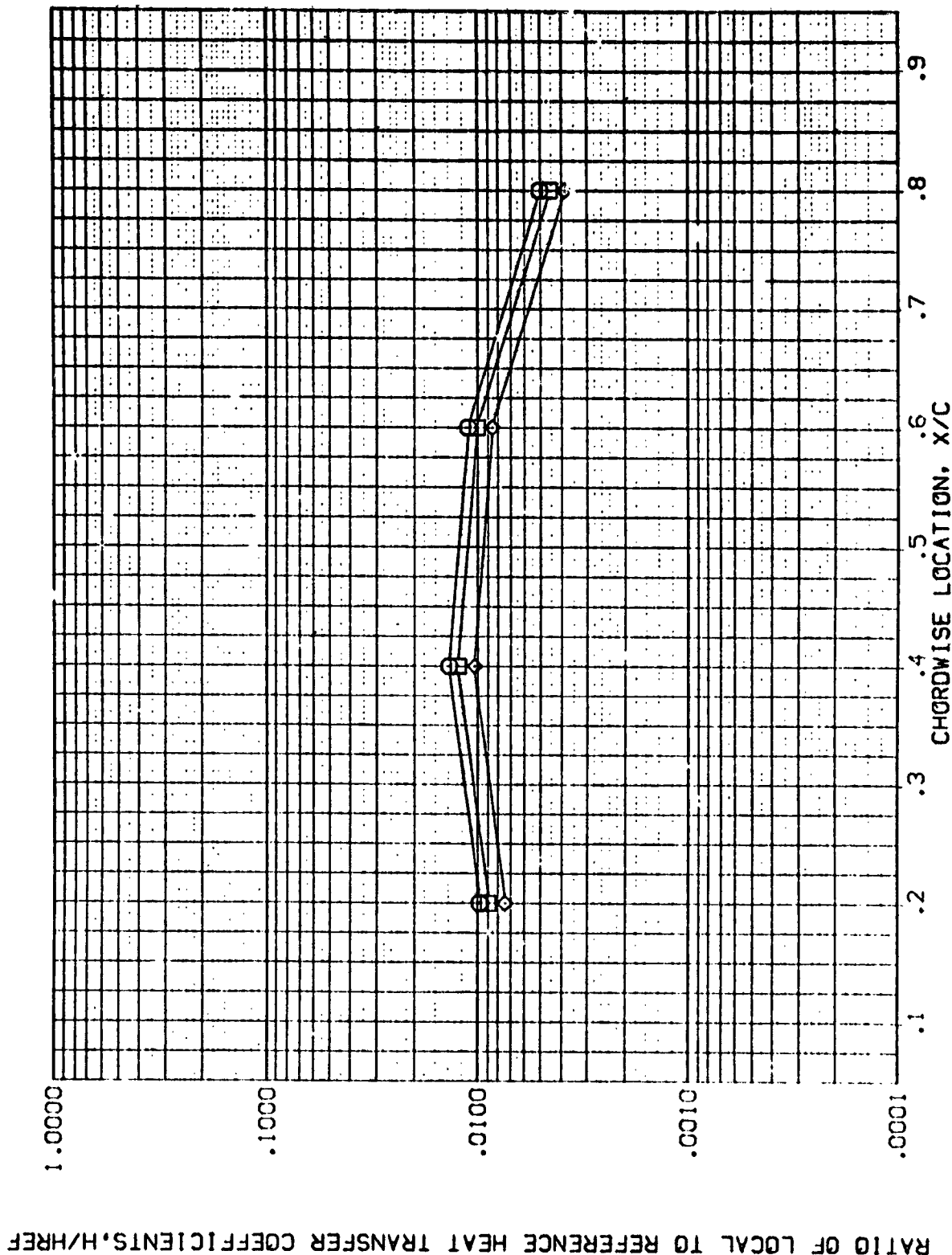


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 (REV G23)

WING UPPER SURFACE

WING UPPER SURFACE

SYMBOL

HAIR/HT

ZY/B

MACH

5.220

.600

.850

.900

1.000

PARAMETRIC VALUES

1.000

BETA

.000

ALPHA

RN/L

1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

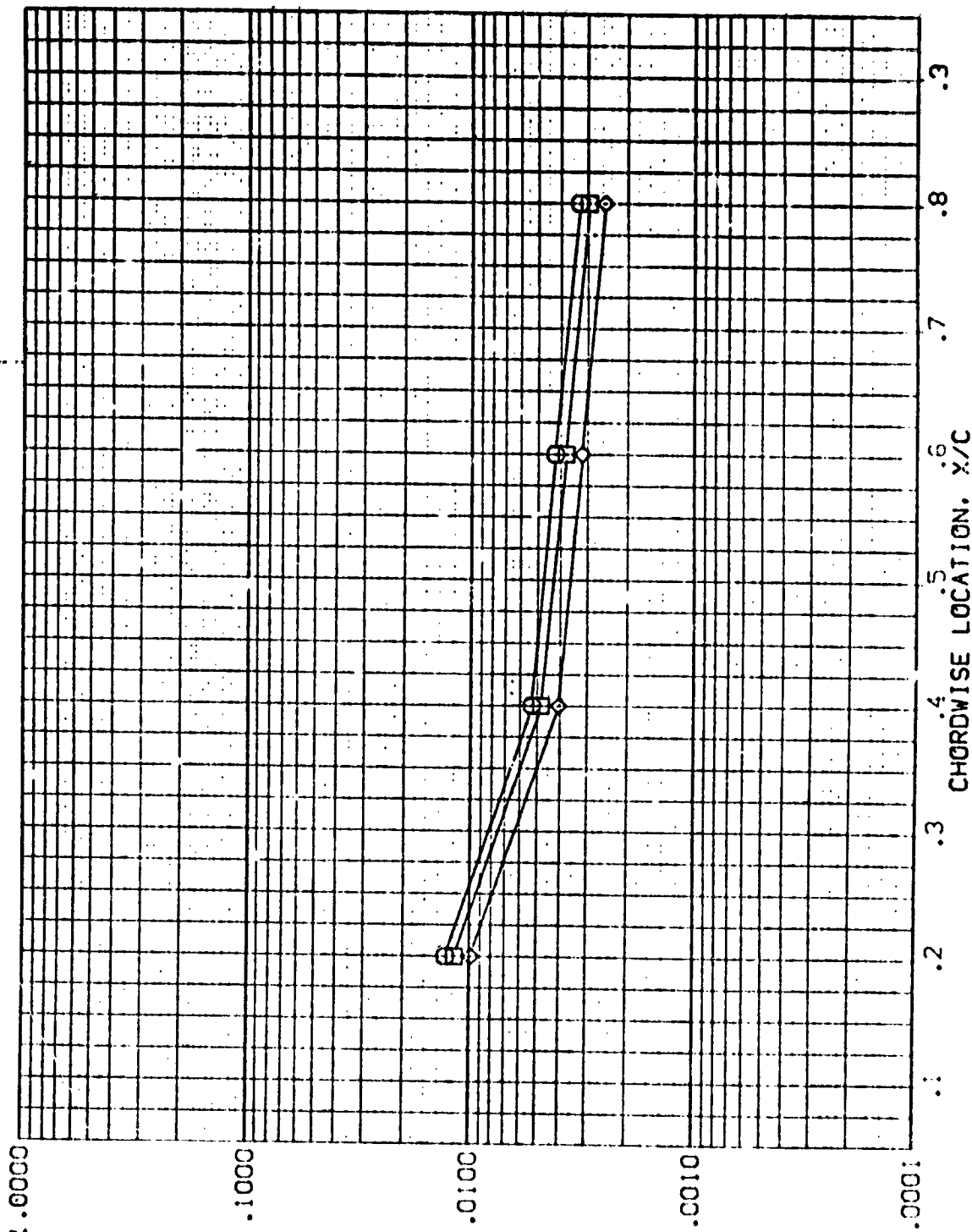


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REVG23)

SYMBOL

MAV/HT
.850
.900
1.000

2Y/B

MACH
.800
5.220

◇

PARAMETRIC VALUES

ALPHA
RN/L

120.000
1.000

BETA

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

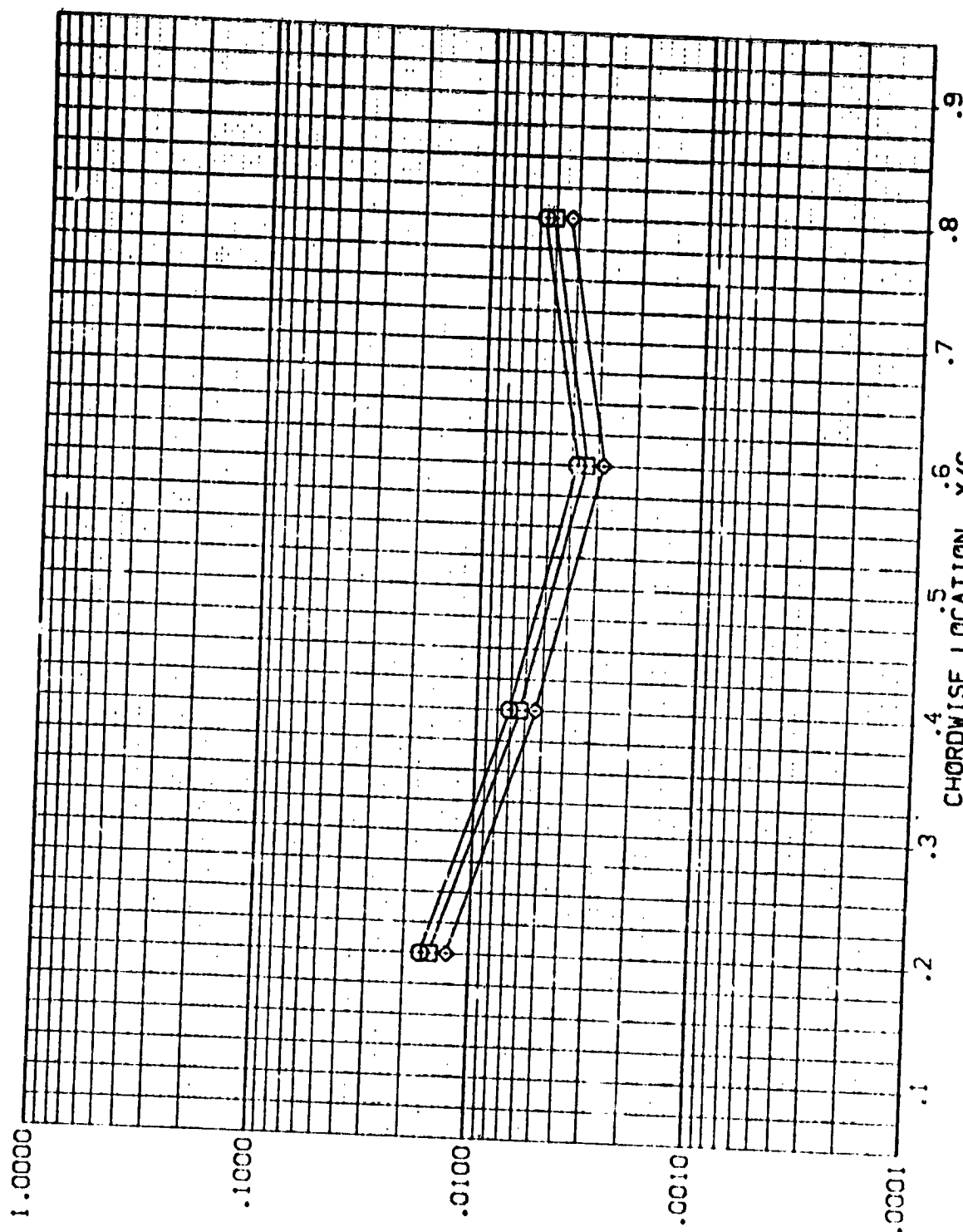


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RV/L 1.000

SYMBOL HAW/HT 2Y/B MACH
 .850 .400 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

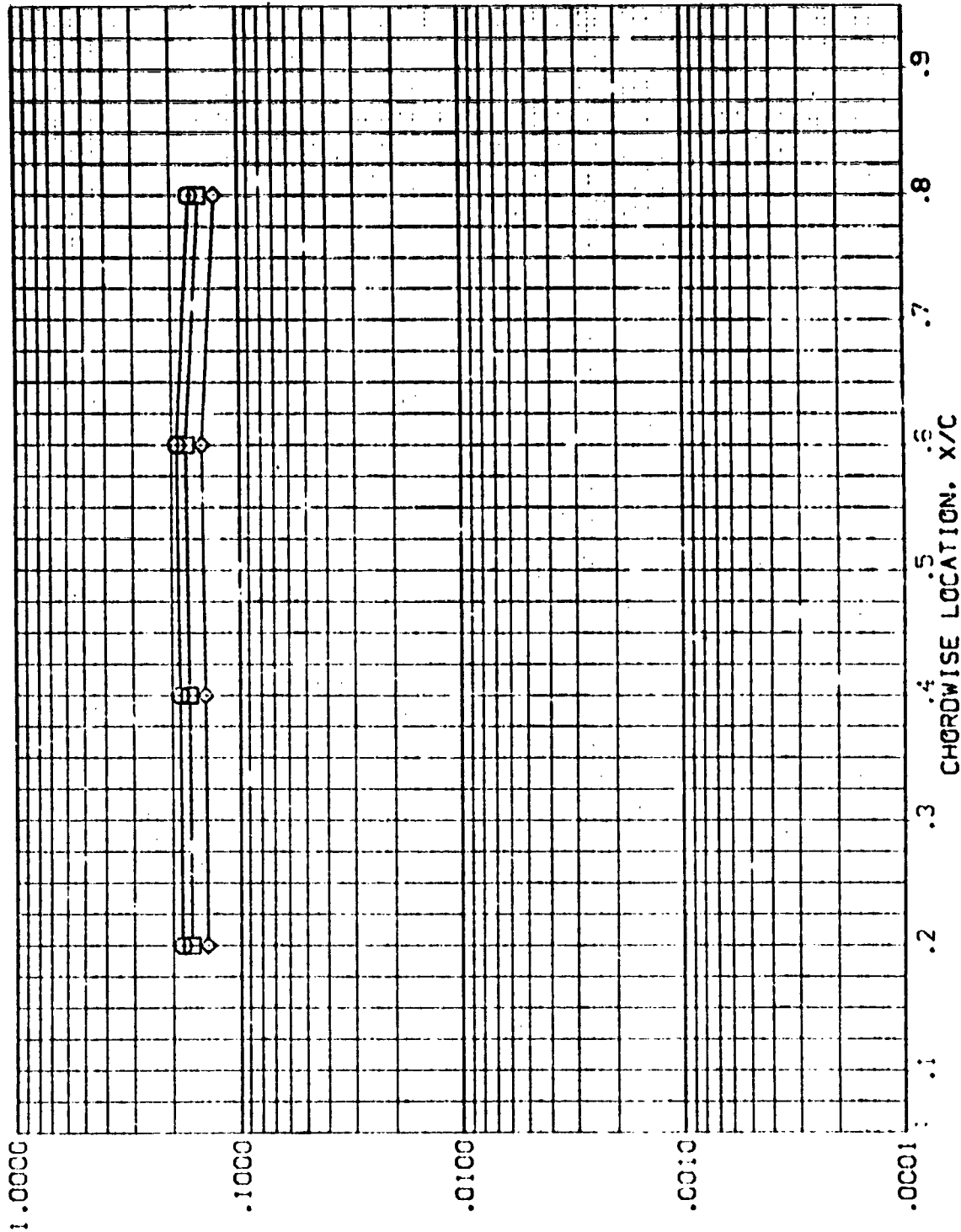


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 1H28 01 WING UPPER SURFACE (REVG24)

SYMBOL	MAW/WT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.800	5.220	ALPHA -1.20 .000
□	.900			BETA 1.000
◇	1.000			

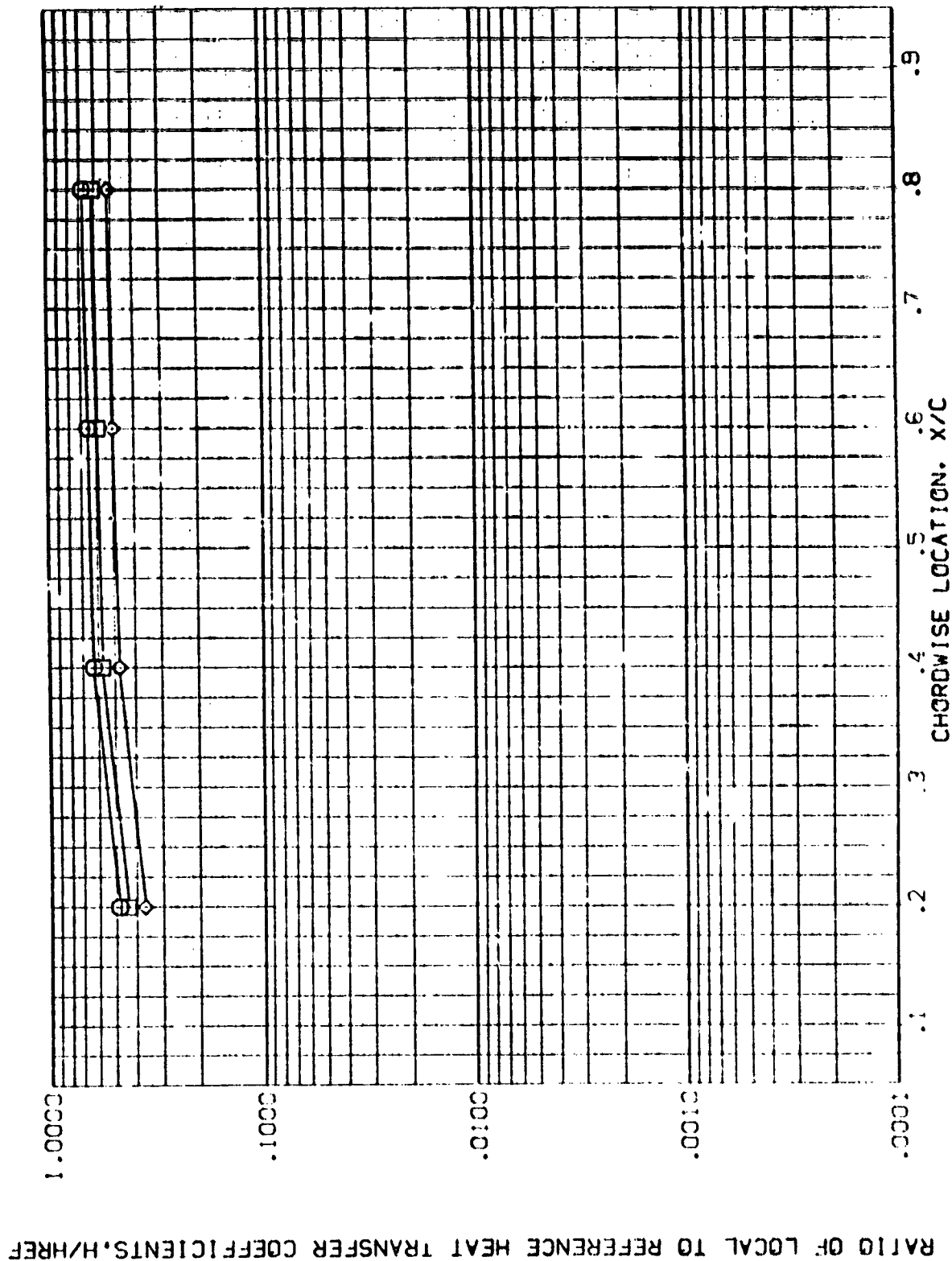


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

PARAMETRIC VALUES
 ALPHA -90.030 BETA .000
 RN% 1.000

SYMBOL HAW/HT 2Y/B MACH
 .850 .400 5.219
 .900
 1.000

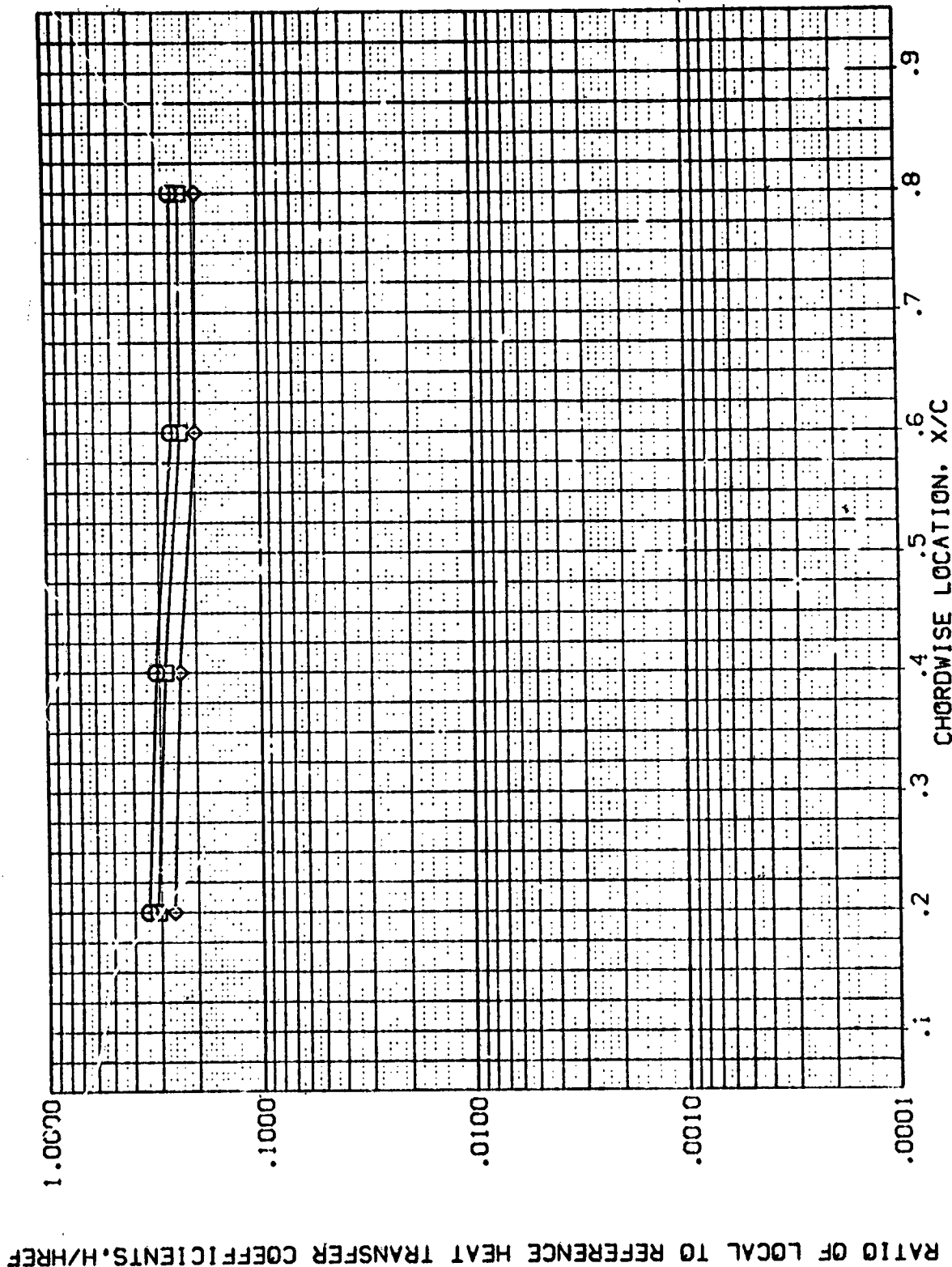


FIG. 22 RIGHT WING UPPER SURFACE, ORCITER ALONE

PARAMETRIC VALUES
 ALPHA -9°.000 BETA .000
 RN/L 1.000

MAV/HT 2Y/B MACH
 .850 .600 5.219
 .900
 1.000

SYMBOL
 ◇
 □

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

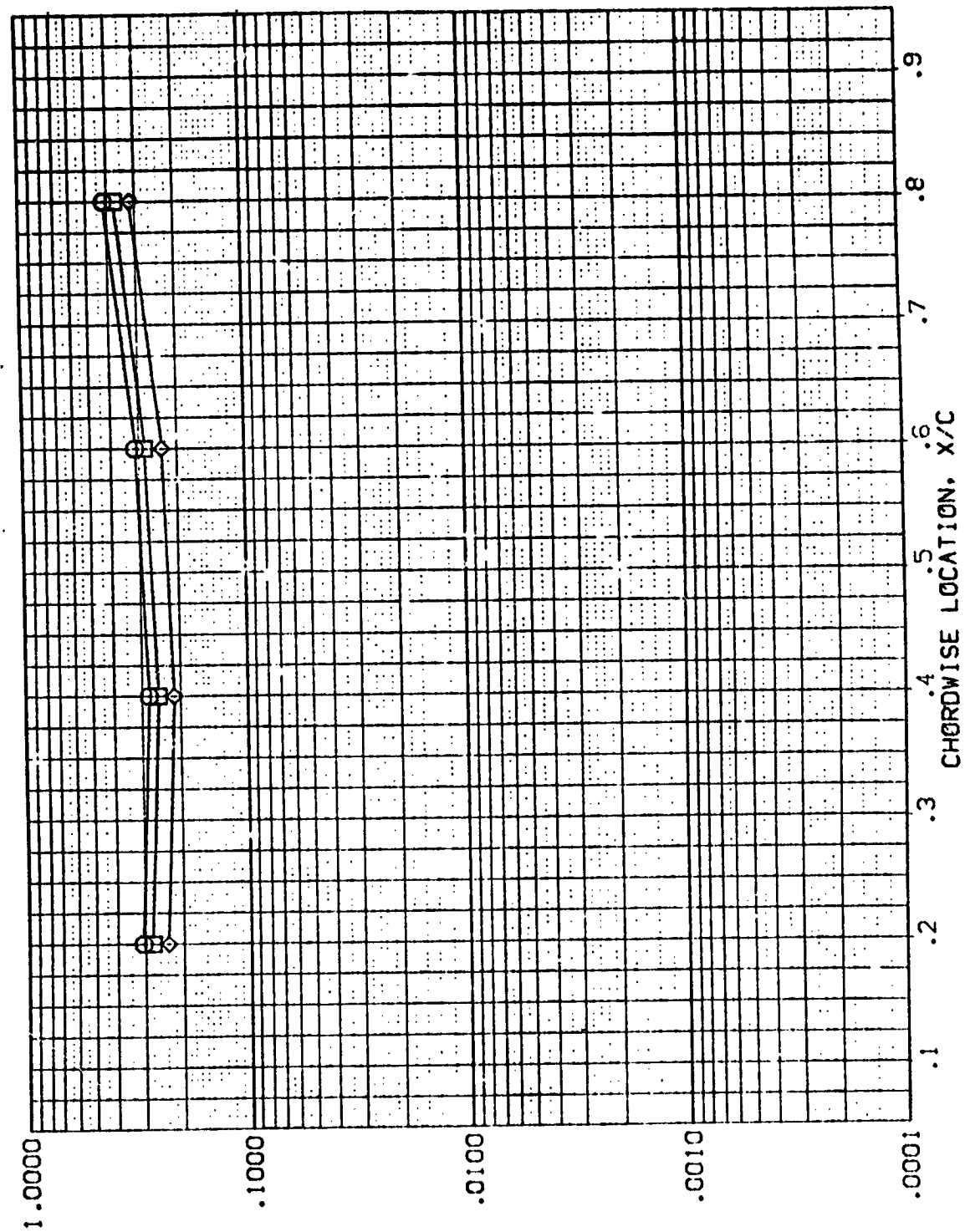


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REV G25)

SYMBOL
 \diamond
 \square
 \square

HAY/HT .850
 2Y/B .800
 MACH 5.219
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -90.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

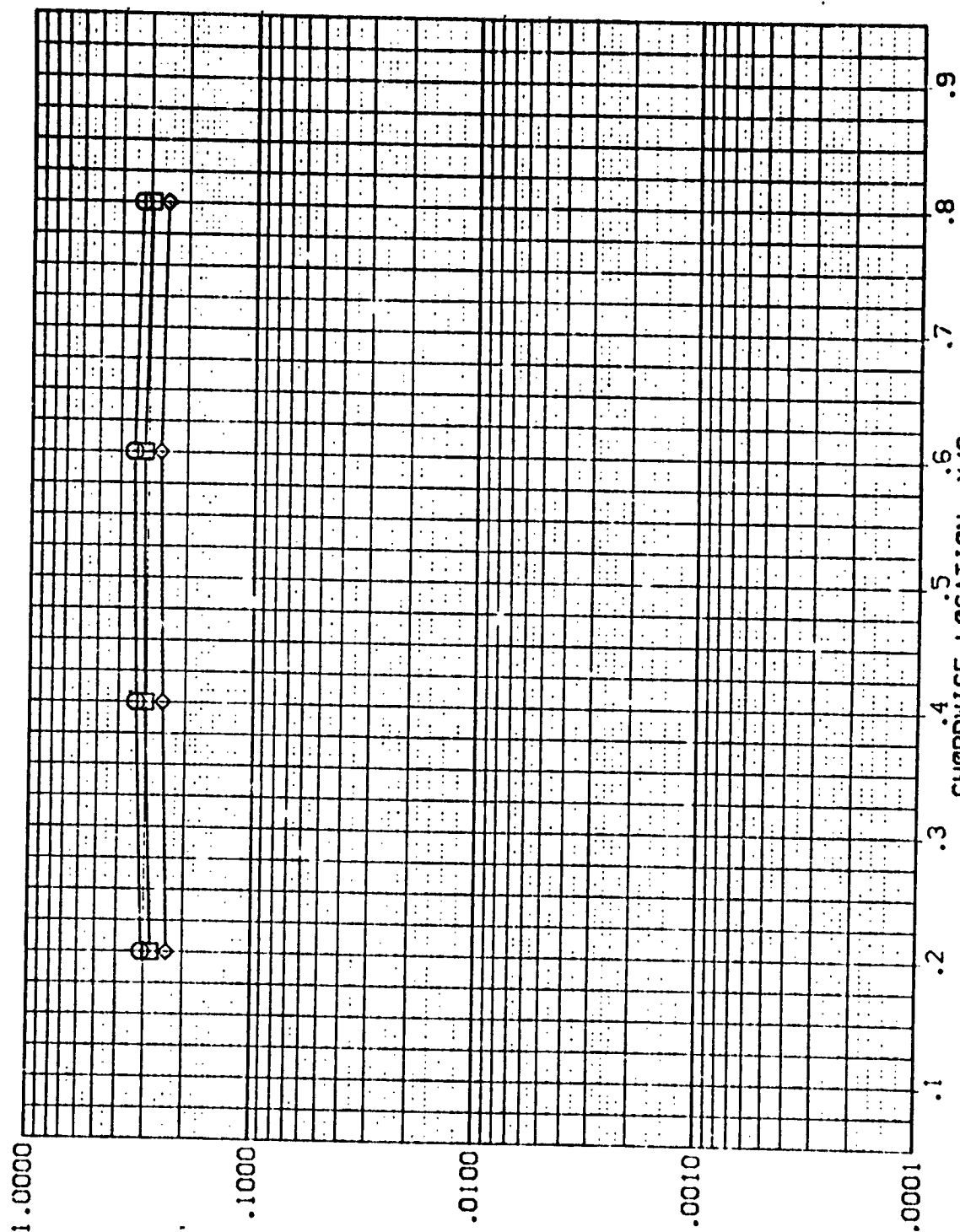


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV626)

SYMBOL HAW/HT 2Y/B MACH
 ◇ .850 .400 5.220
 □ .900
 ○ 1.000

PARAMETRIC VALUES
 ALPHA -0.000
 RN/L 1.000
 BETA .000

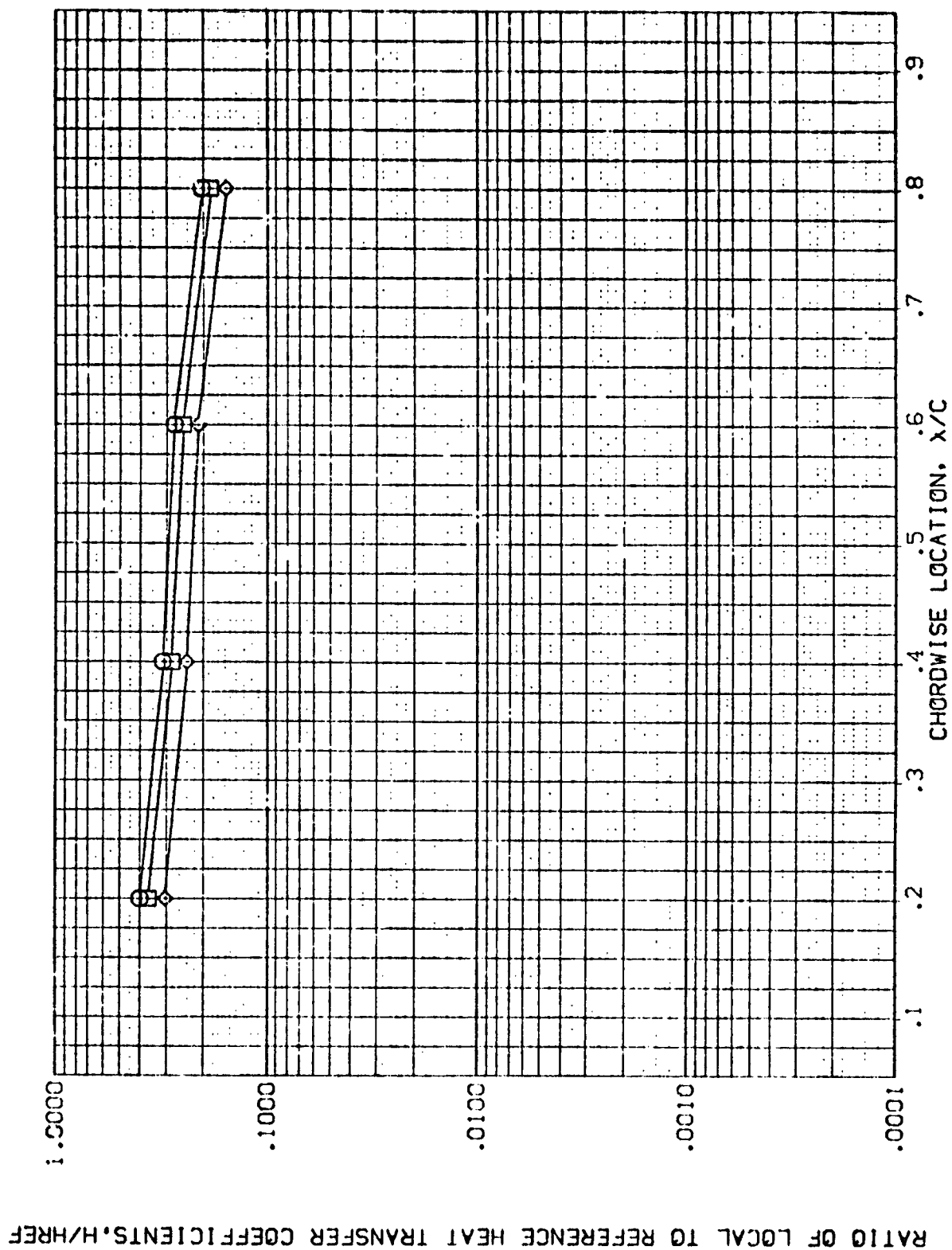


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REVG26)

SYMBOL

HAW/HT

2Y/B

MACH

ALPHA

RN/L

PARAMETRIC VALUES

-60.000

BETA

1.000

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

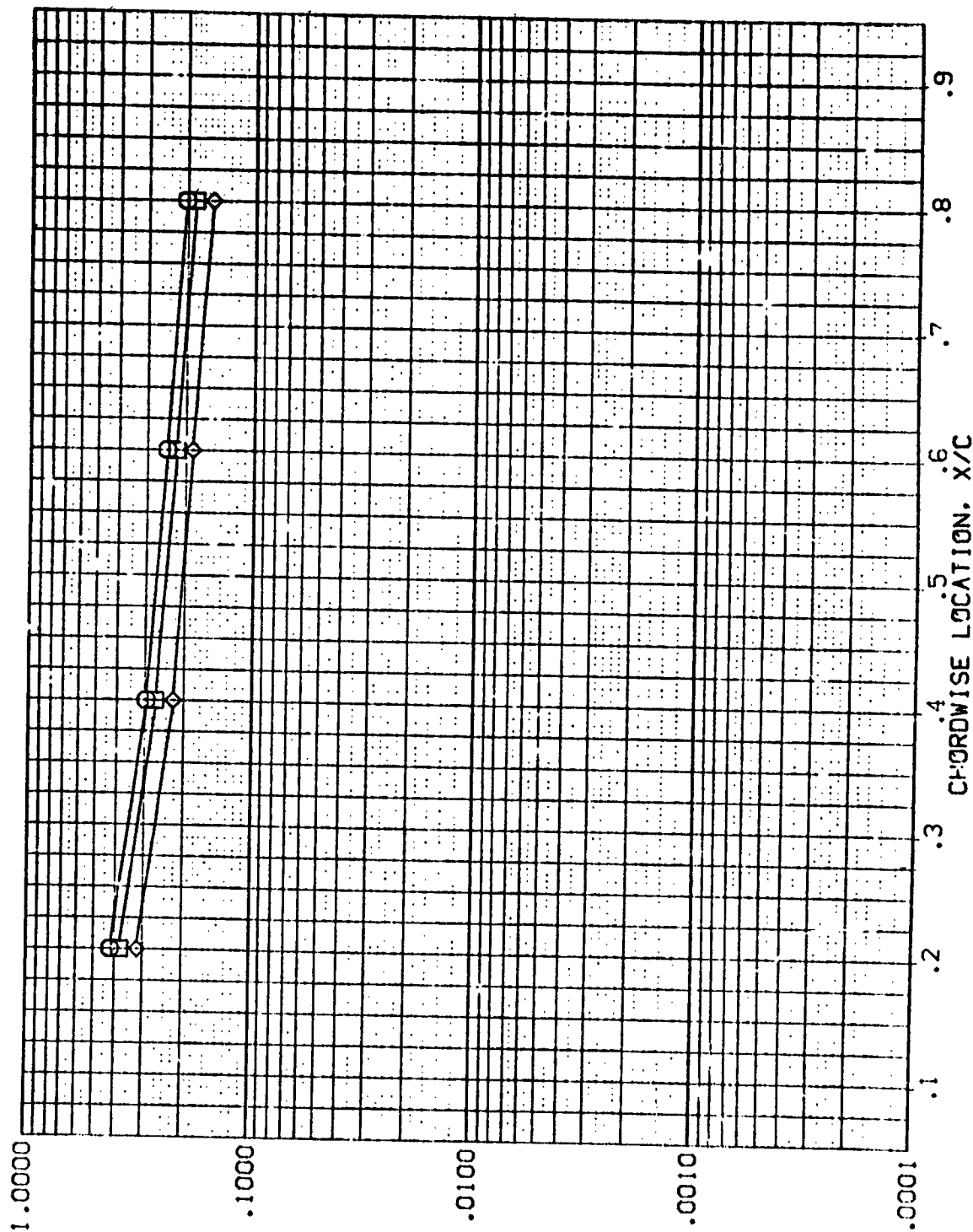


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REVG26)

SYMBOL HAW/HT 2Y/B MACH
 ◊ .850 .800 5.220
 □ .900
 ◊ 1.000

PARAMETRIC VALUES
 ALPHA -60.000
 RN/L 1.000
 BETA .000

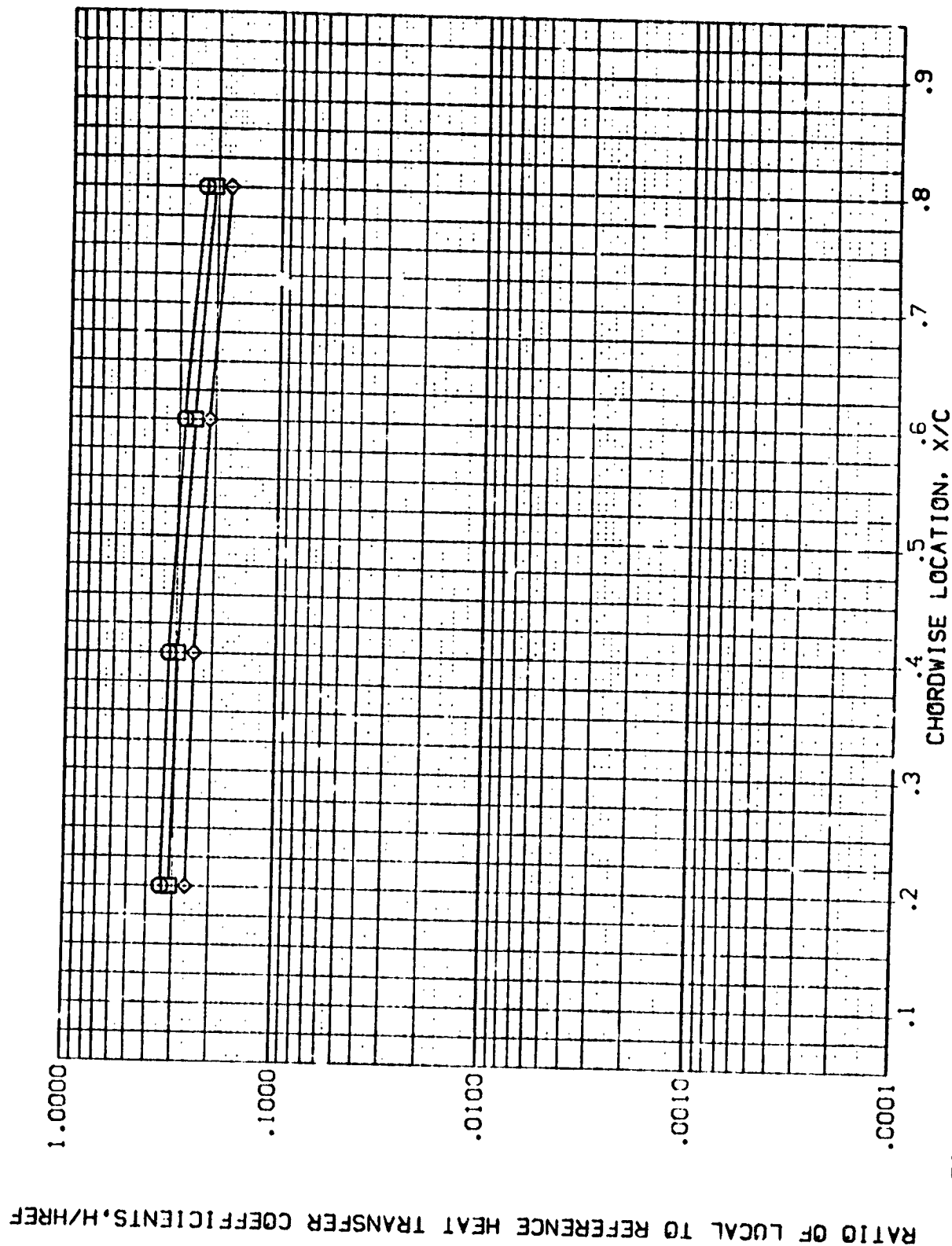


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 1H28 01 WING UPPER SURFACE (REV627)

SYMBOL	HAU/HT	2Y/B	MACH	PARAMETER, C VALUES
□	.850	.400	5.220	ALPHA
◇	.900			RN/L
	1.000			BET.
				.000

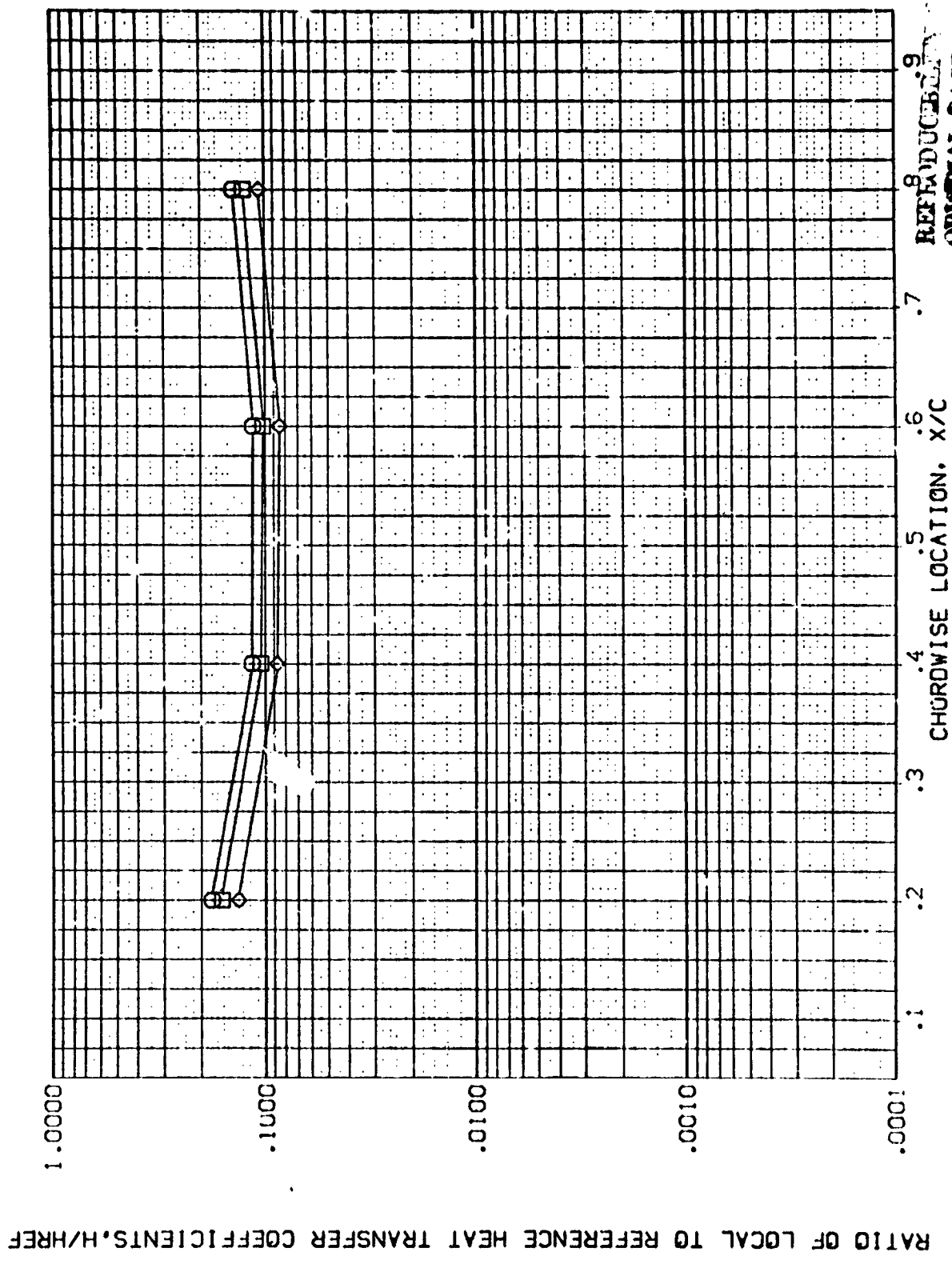


FIG. 22 RIGHT WING UPPER SURFACE. ORBITER ALONE

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(REVG27)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
-30.000 BETA .000
1.000

ALPHA
RN/L

SYMBOL
MAW/HT
21/B
MACH
1.000
.900
.850
.600
5.220

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

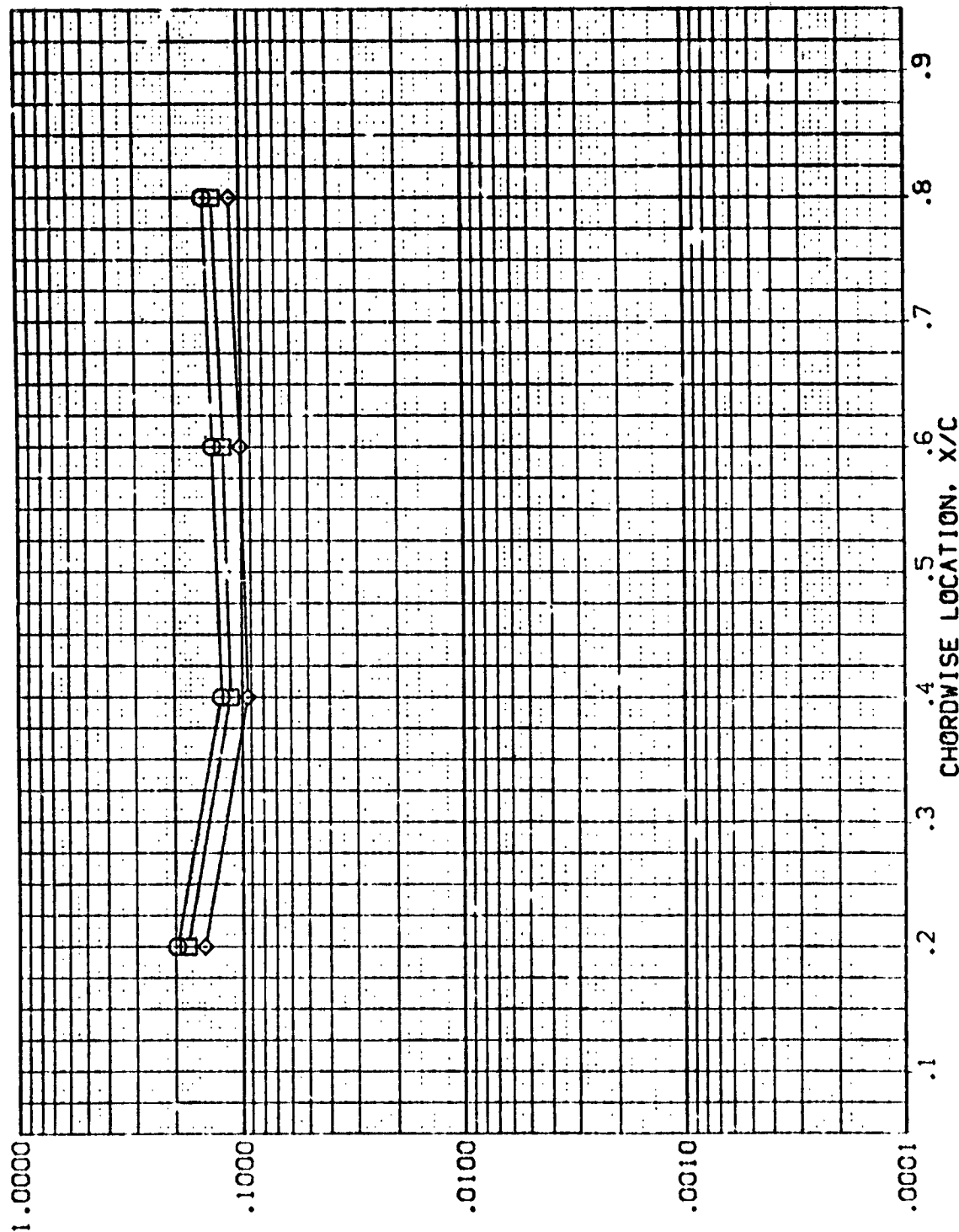


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV627)

SYMBOL	MAN/HT	ZY/B	MACH	ALPHA	BETA
◇	.850	.800	5.220	RV/L	
□	.900				
◇	1.000				

PARAMETRIC VALUES
-30.000 1.000 .000

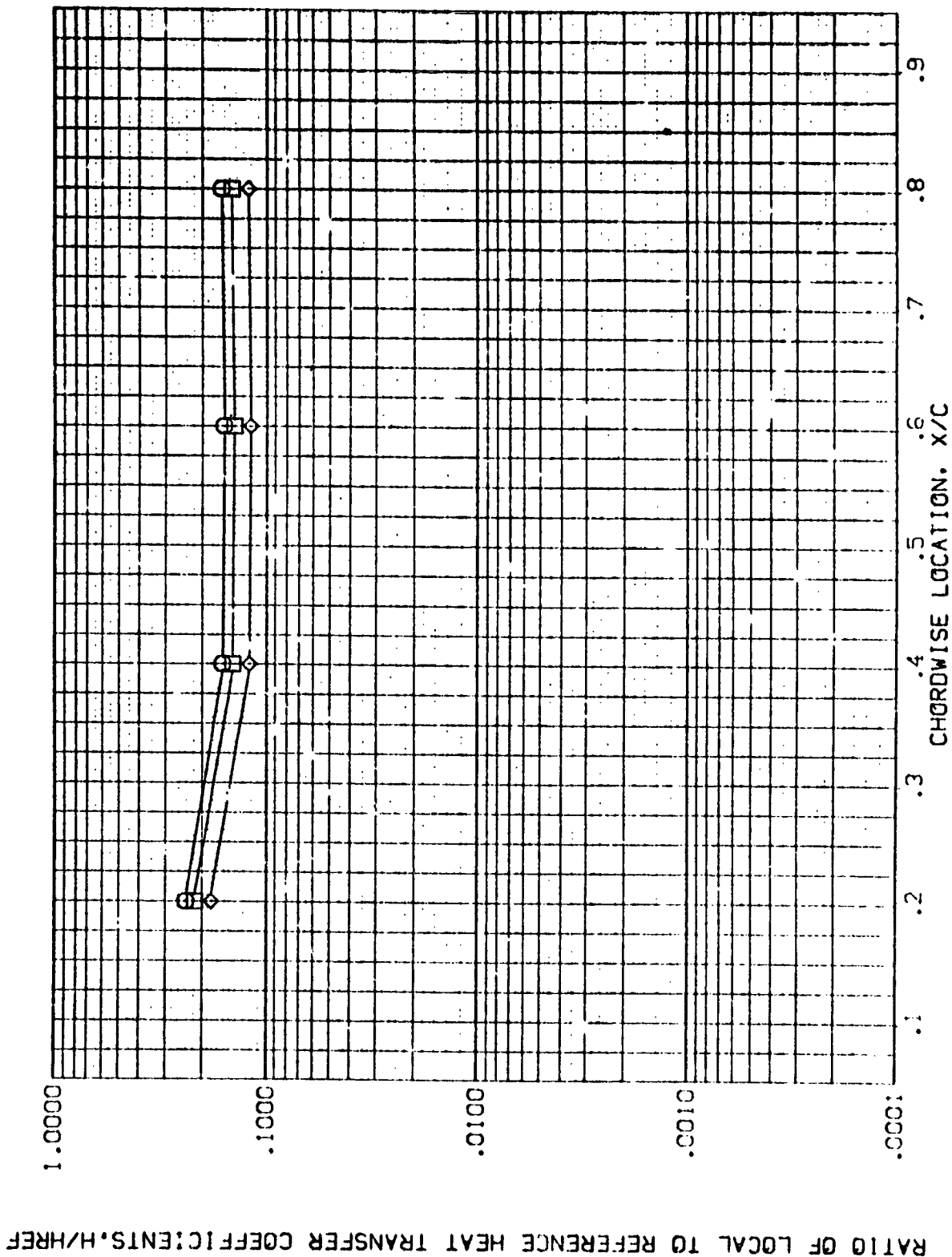


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER S'RFACE (REV G19)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA RV/L	BETA
◇	.850	.200	5.220	.000	.000
◇	.900			1.000	
◇	1.000				

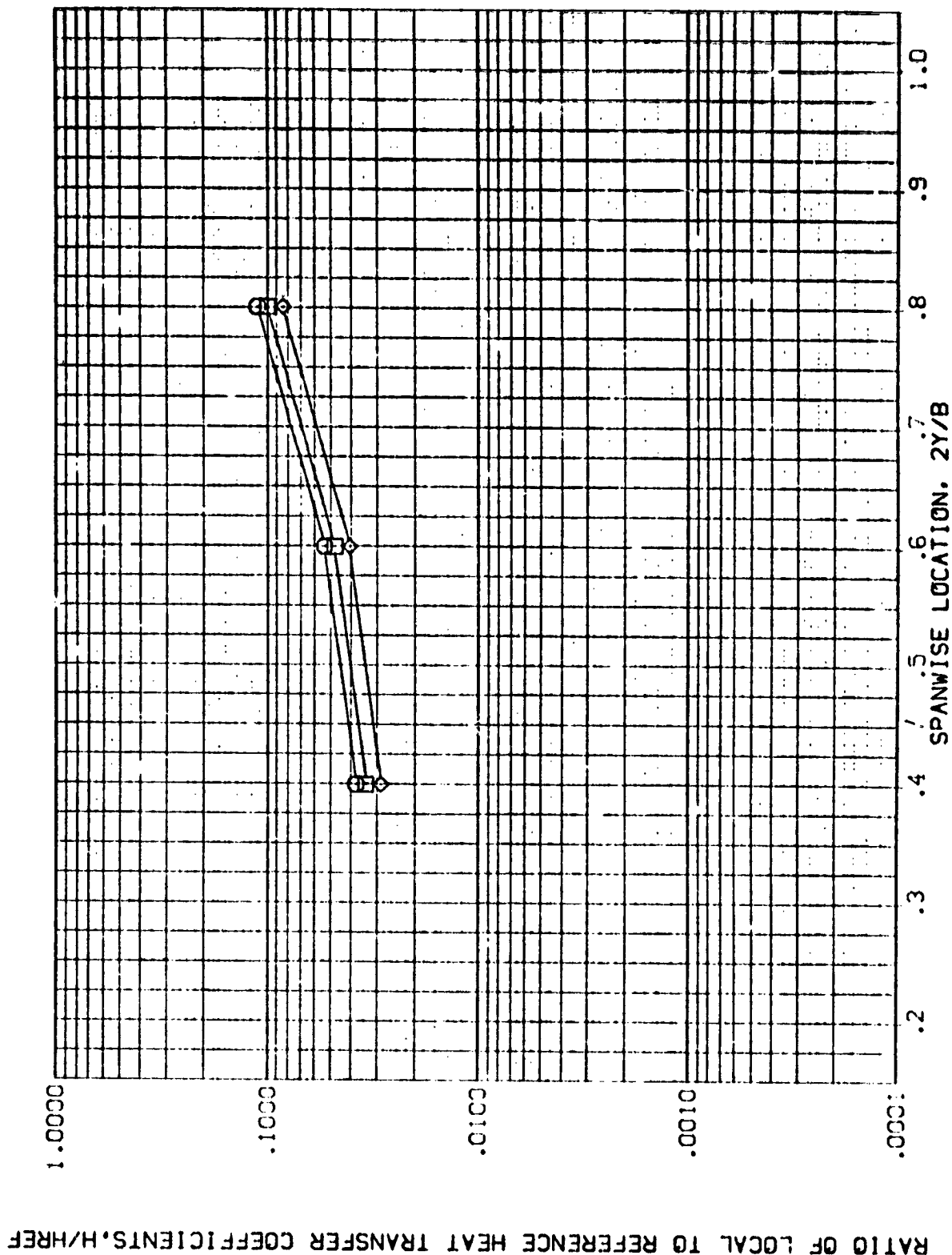


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG19)

SYMBOL	MAW/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.400	5.220	.CDD .000
□	.900			BETA 1.000
◇	1.000			ALPHA
				RV/L

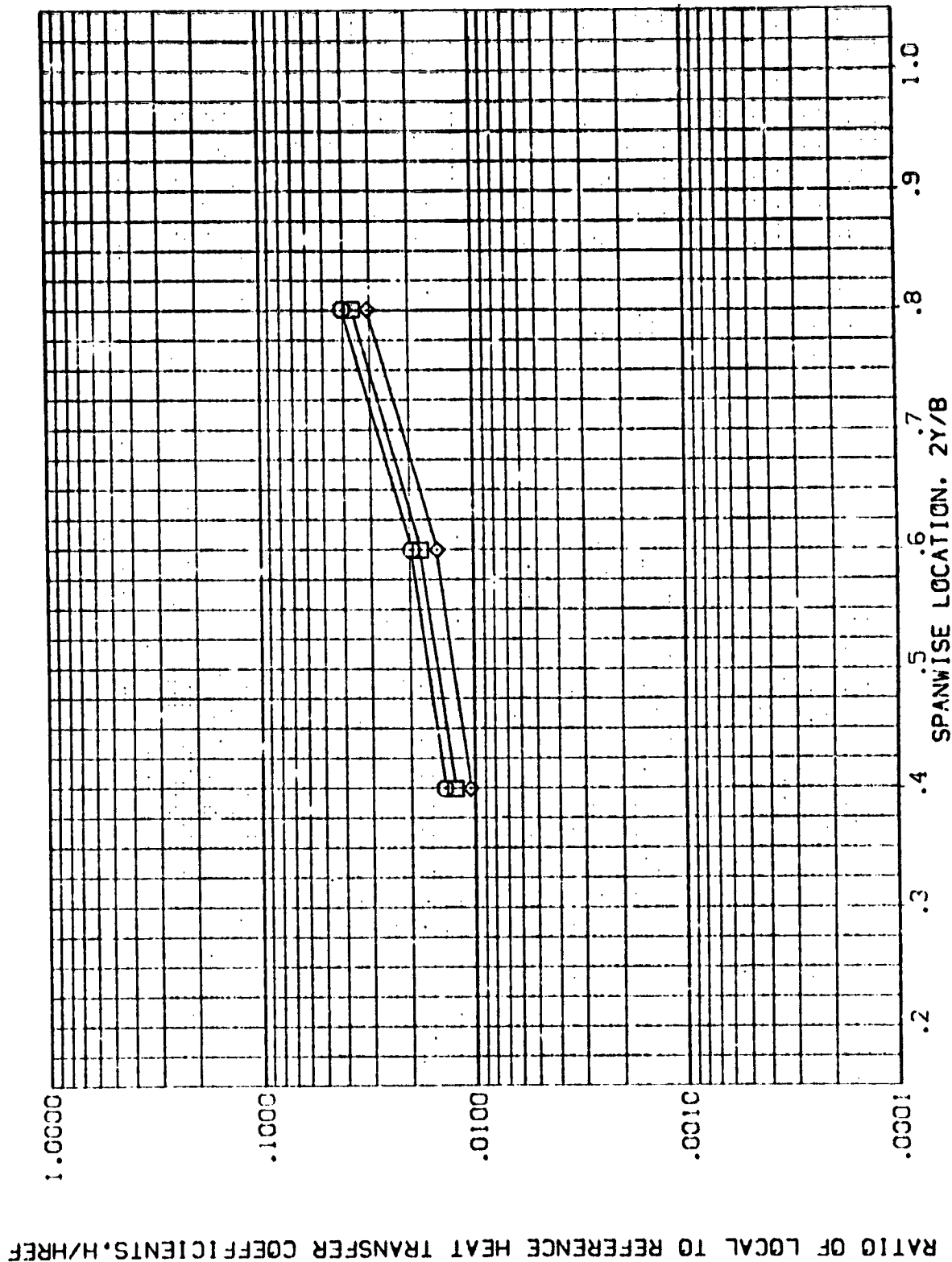


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

SYMBOL	HP/H	X/C	MACH	PARAMETRIC VALUES
◇	.850	.600	5.220	ALPHA
□	.900			RM/L
◇	1.000			BETA
				.000

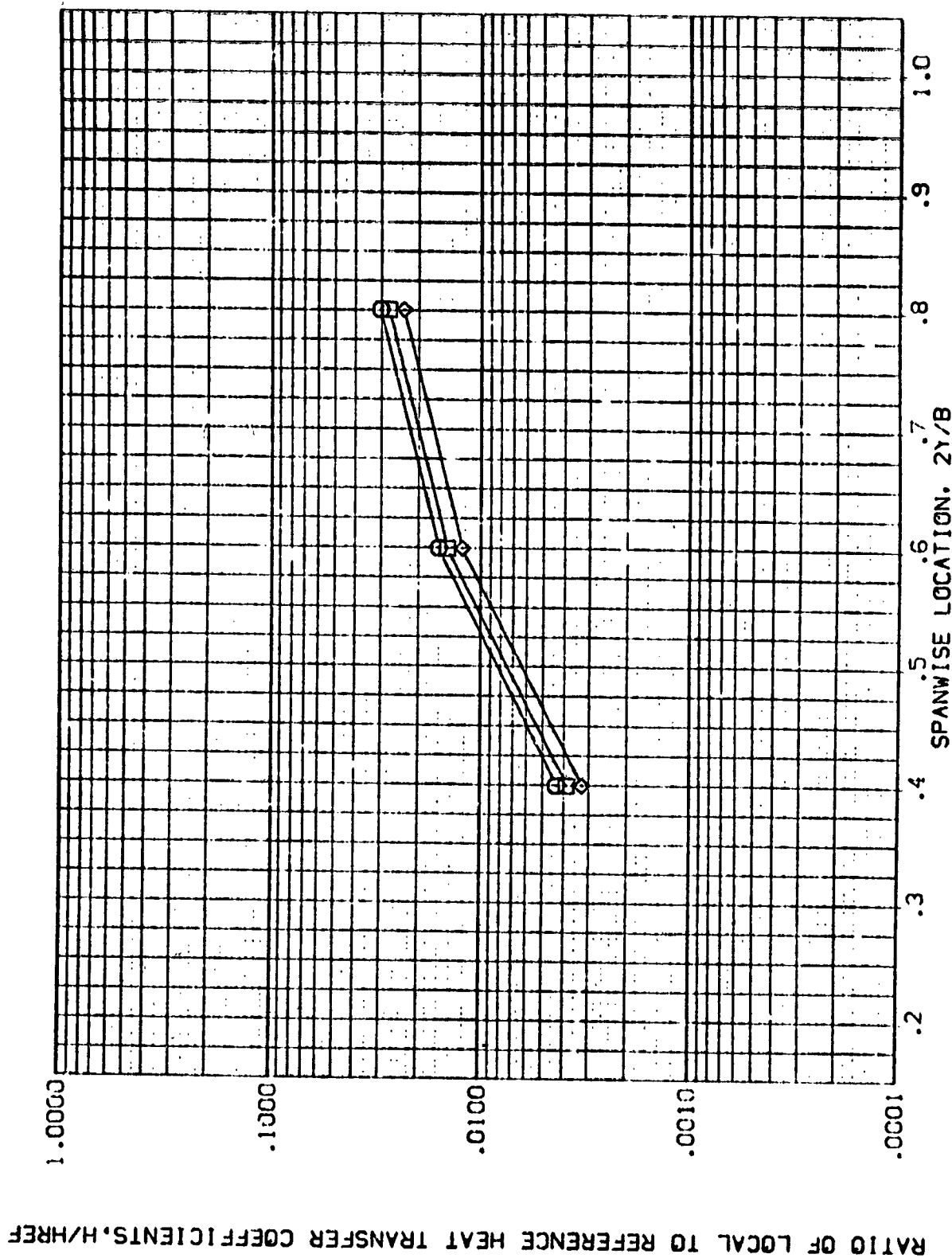


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G19)

SYMBOL	HAU/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.800	5.220	ALPHA
◇	.900			RN/L
◇	1.000			BETA
				.000
				1.000

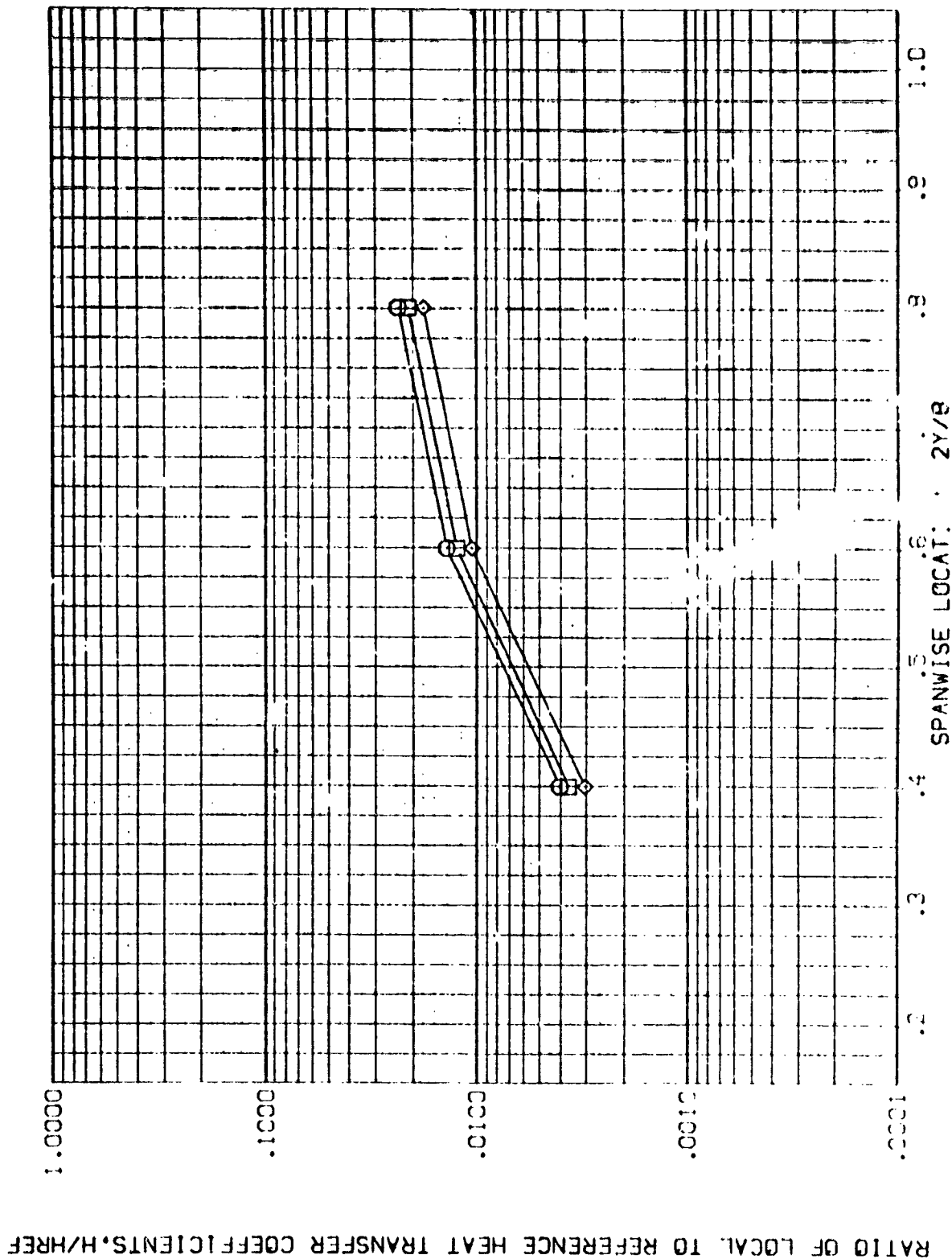


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER A

(REV G20)

WING UPPER SURFACE

AMES 3.5-195 1H28 01

PARAMETRIC VALUES
30.000 BETA
1.000

ALPHA
RN/L

MACH
5.219

X/C
.200

HA/W/HT
.850
.900
1.000

SYMBOL
◇
□
◇

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

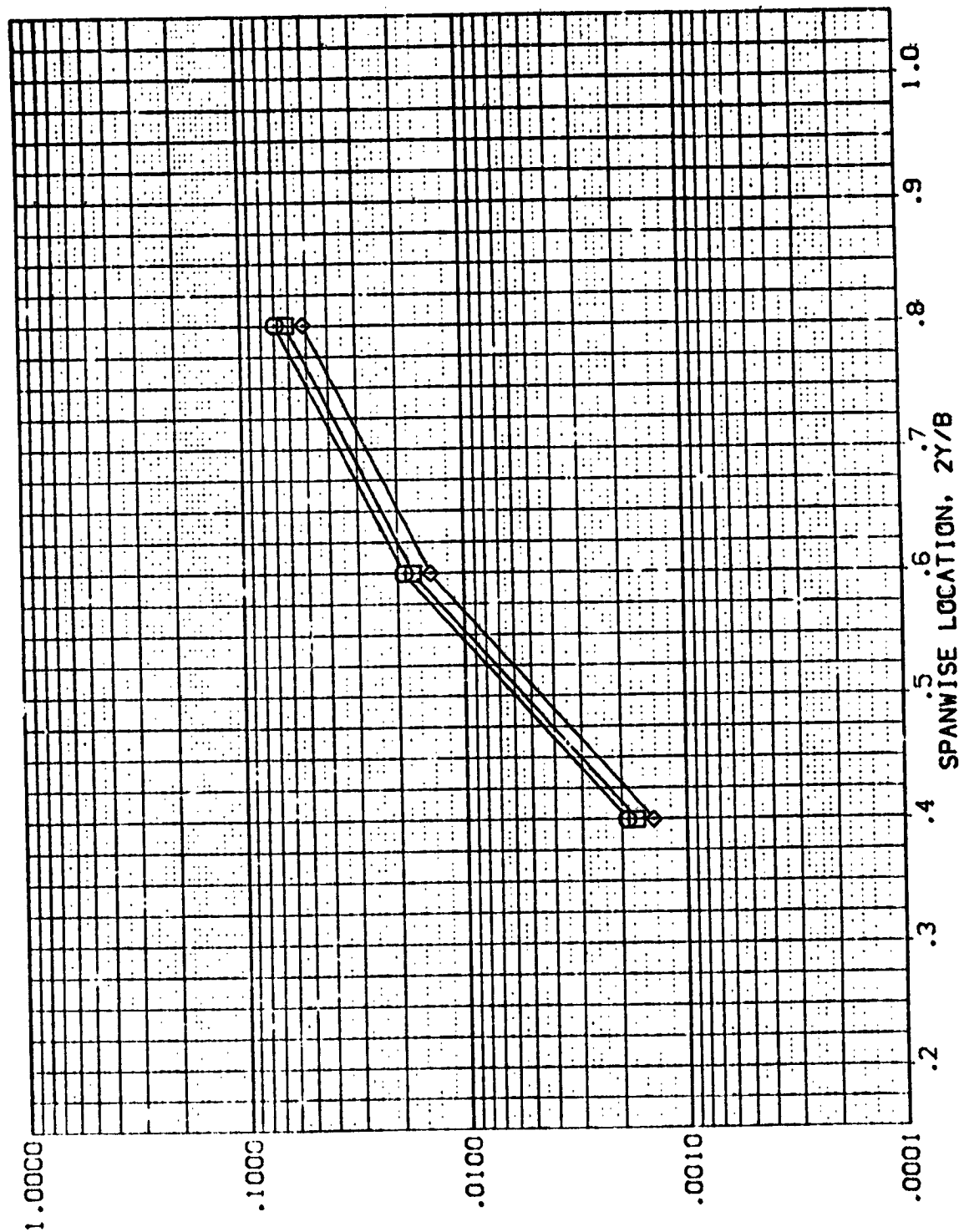


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G20)

PARAMETRIC VALUES
 ALPHA 3C .000 BETA .000
 RN/L 1.000

SYMBOL HAW/HT X/C MACH
 ◇ .850 .400 5.219
 □ .900
 ◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

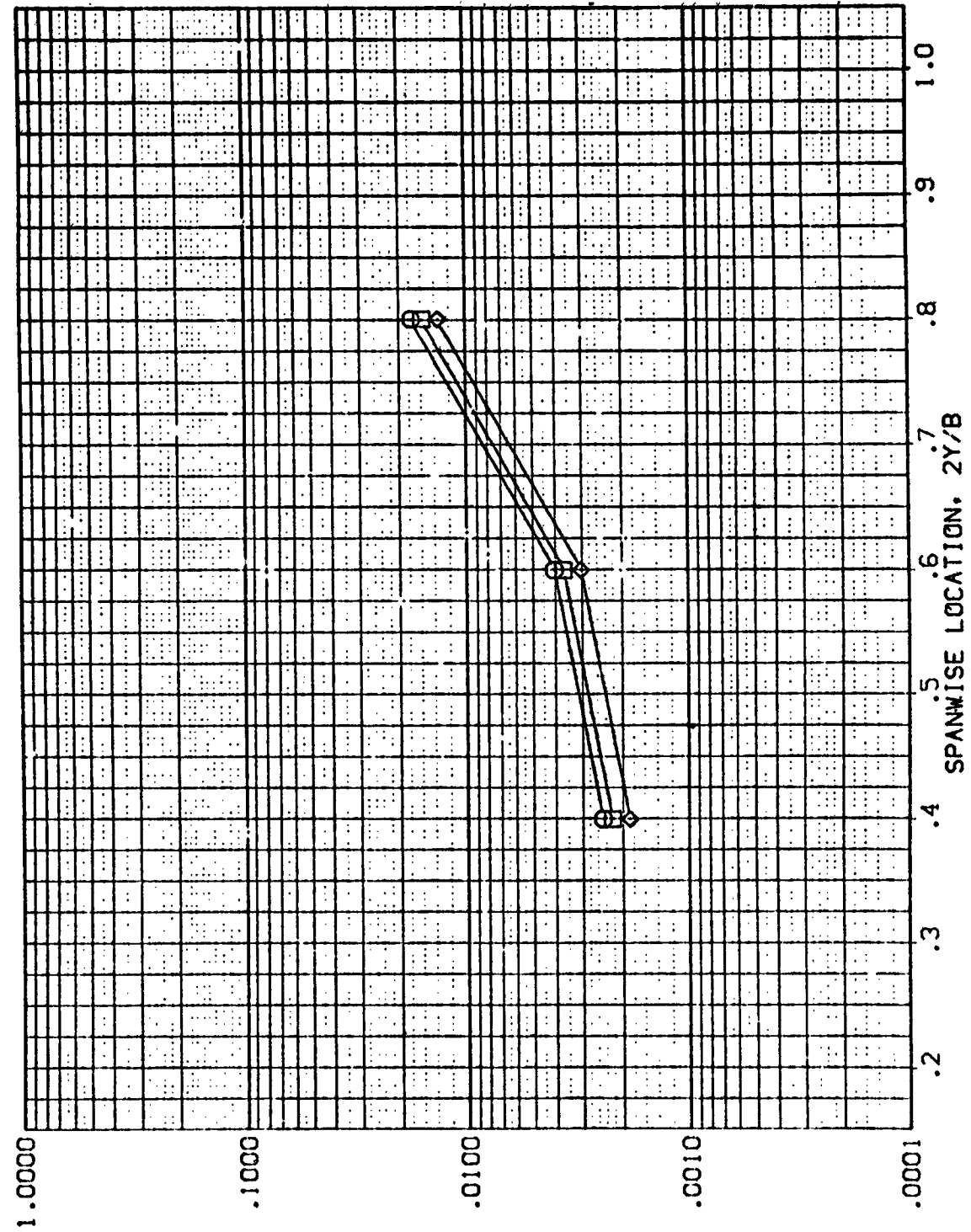
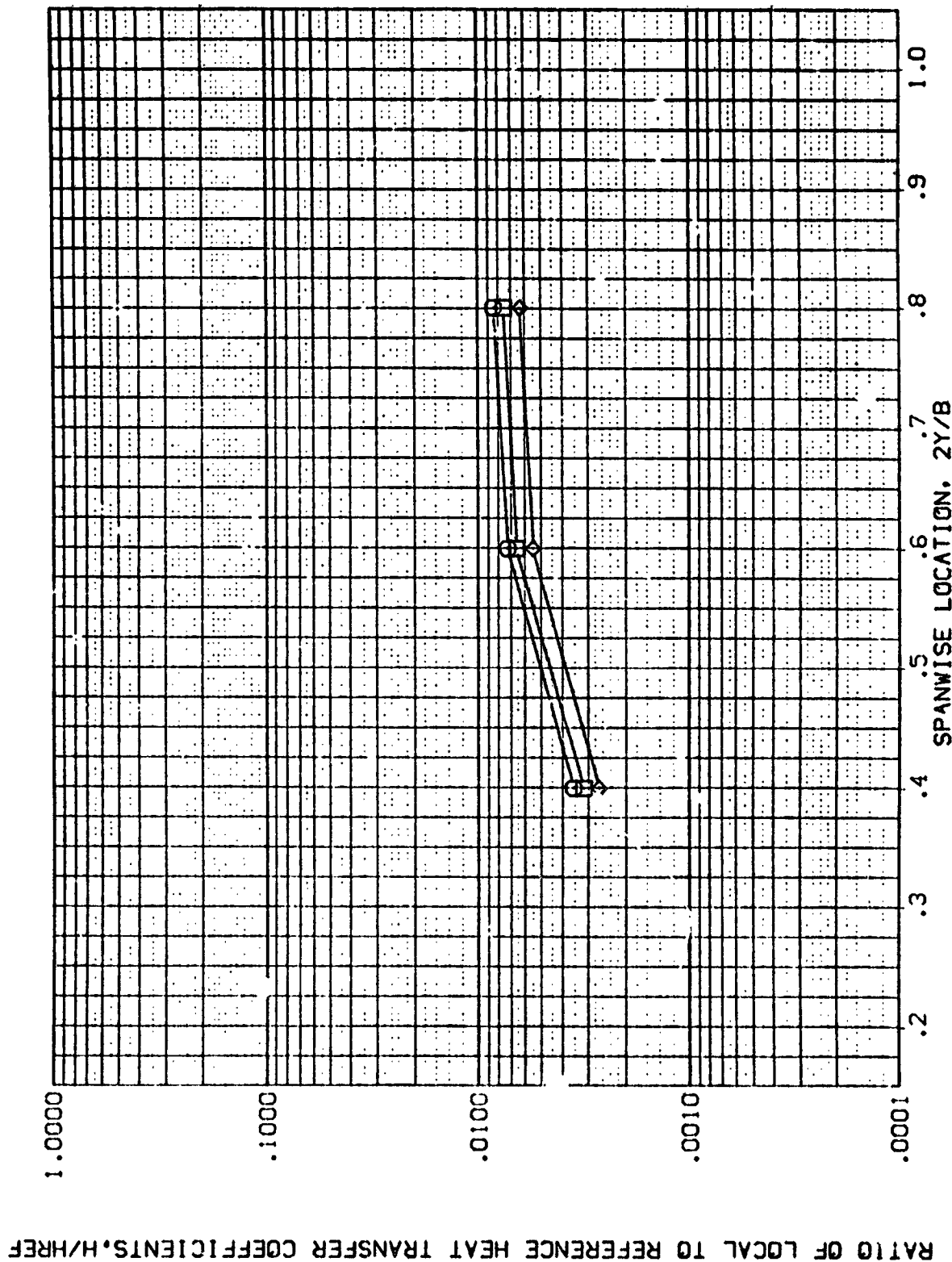


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

SYMBOL	<input type="checkbox"/> \square \diamond .850 .900 1.000	MAX/HT .600 .600 .600	X/C .600 .600 .600	MACH 5.219 5.219 5.219	PARAMETRIC VALUES	
					ALPHA	BETA
					RN/L	30.000 1.000 1.000



AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV620)

PARAMETRIC VALUES
 30.000 BETA .000
 1.000

ALPHA
 RN/L

SYMBOL H'WZHT X/C MACH
 .850 .800 5.219
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

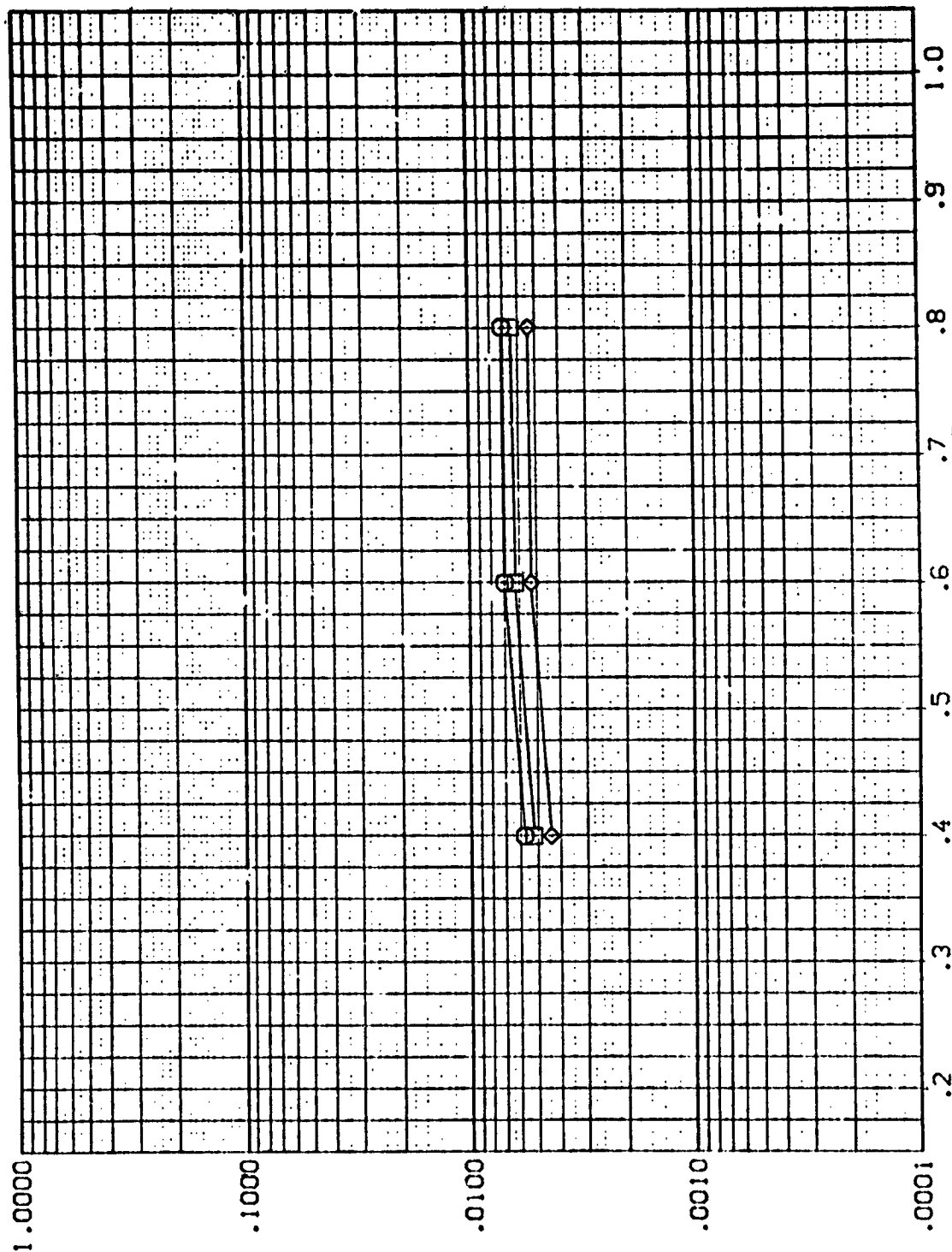


FIG. 22 RIGHT WING UPPER SURFACE. ORBITER ALONE

(REV G21)

WING UPPER SURFACE

AMES 3.5-195 1H28 01

SYMBOL \diamond \square \circ

HA/H _T	X/C	MACH
.850	.200	5.220
.900		
1.000		

PARAMETRIC VALUES

60.000	BETA	.000
1.000	RN/L	

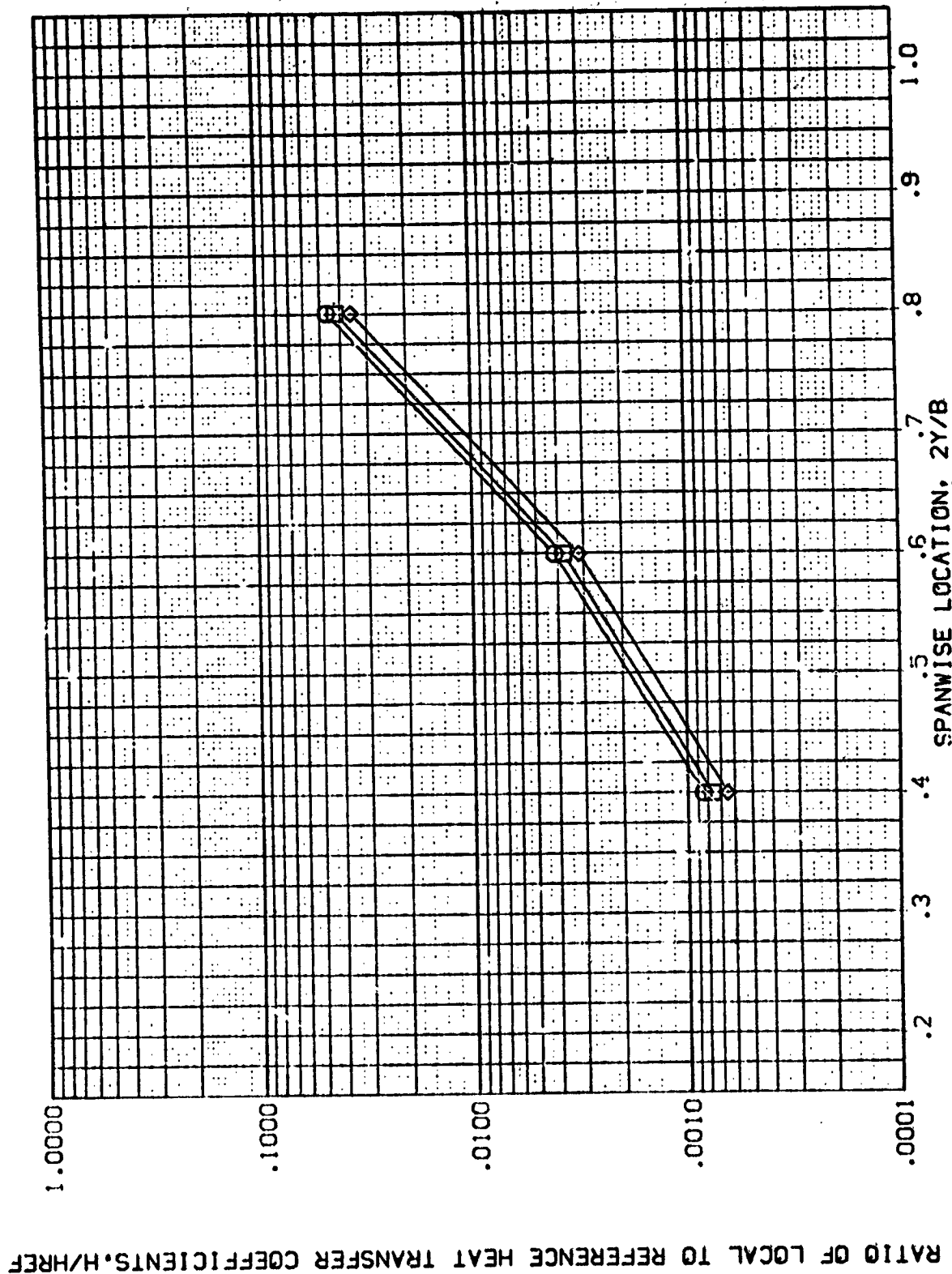


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV621)

SYMBOL
 \diamond
 \square

H/W/HT X/C MACH
 .850 .400 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 60.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

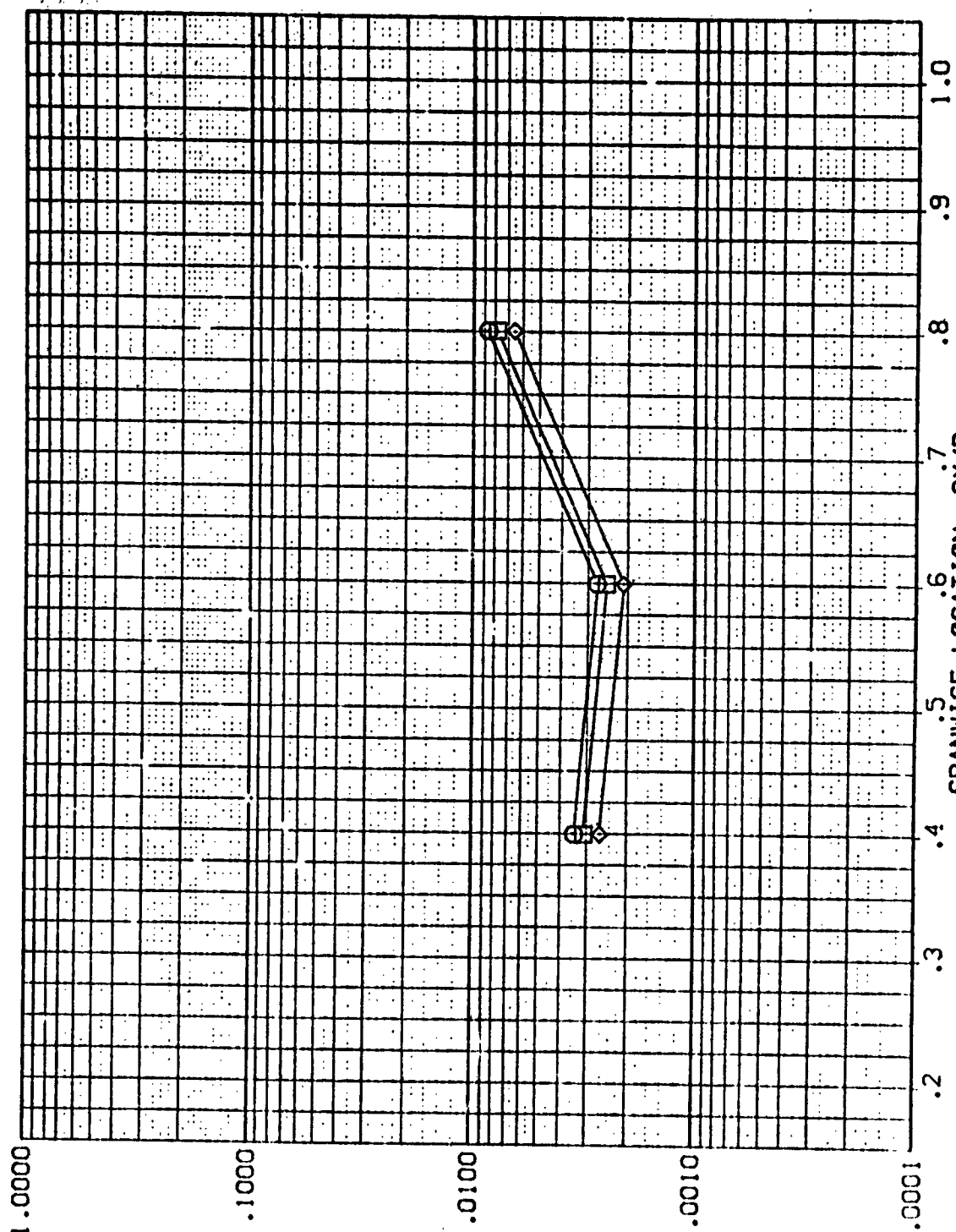


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01

WING UPPER SURFACE

(REV G21)

PARAMETRIC VALUES
 SQ.0000 BETA .000
 1.0000

ALPHA
 RN/L

SYMBOL HAW/HT X/C MACH
 .850 .600 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

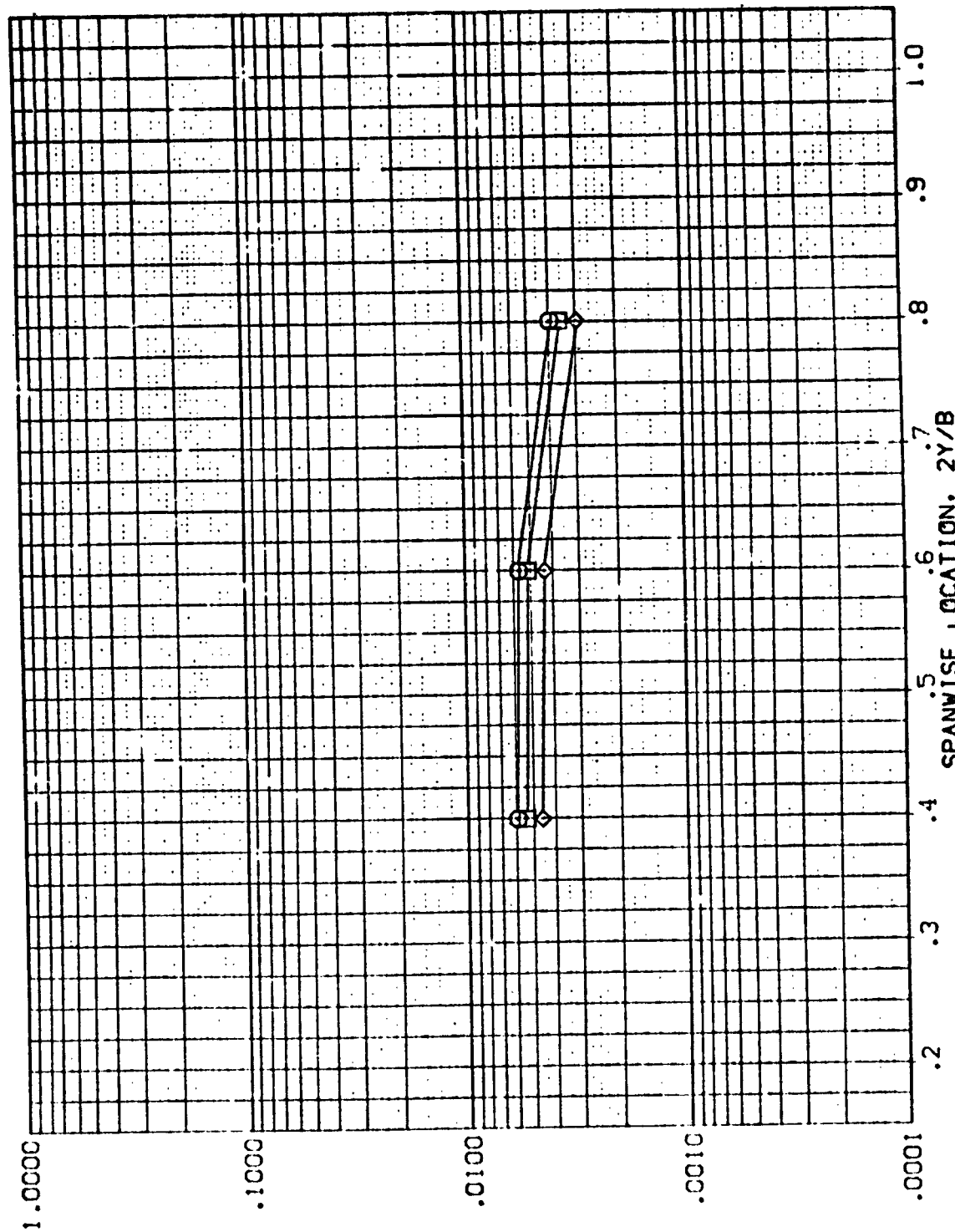


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV621)

PARAMETRIC VALUES
 60.000 BETA
 1.000

ALPHA
 RE / L

SYMBOL MACH X/C MACH
 .950 .800 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

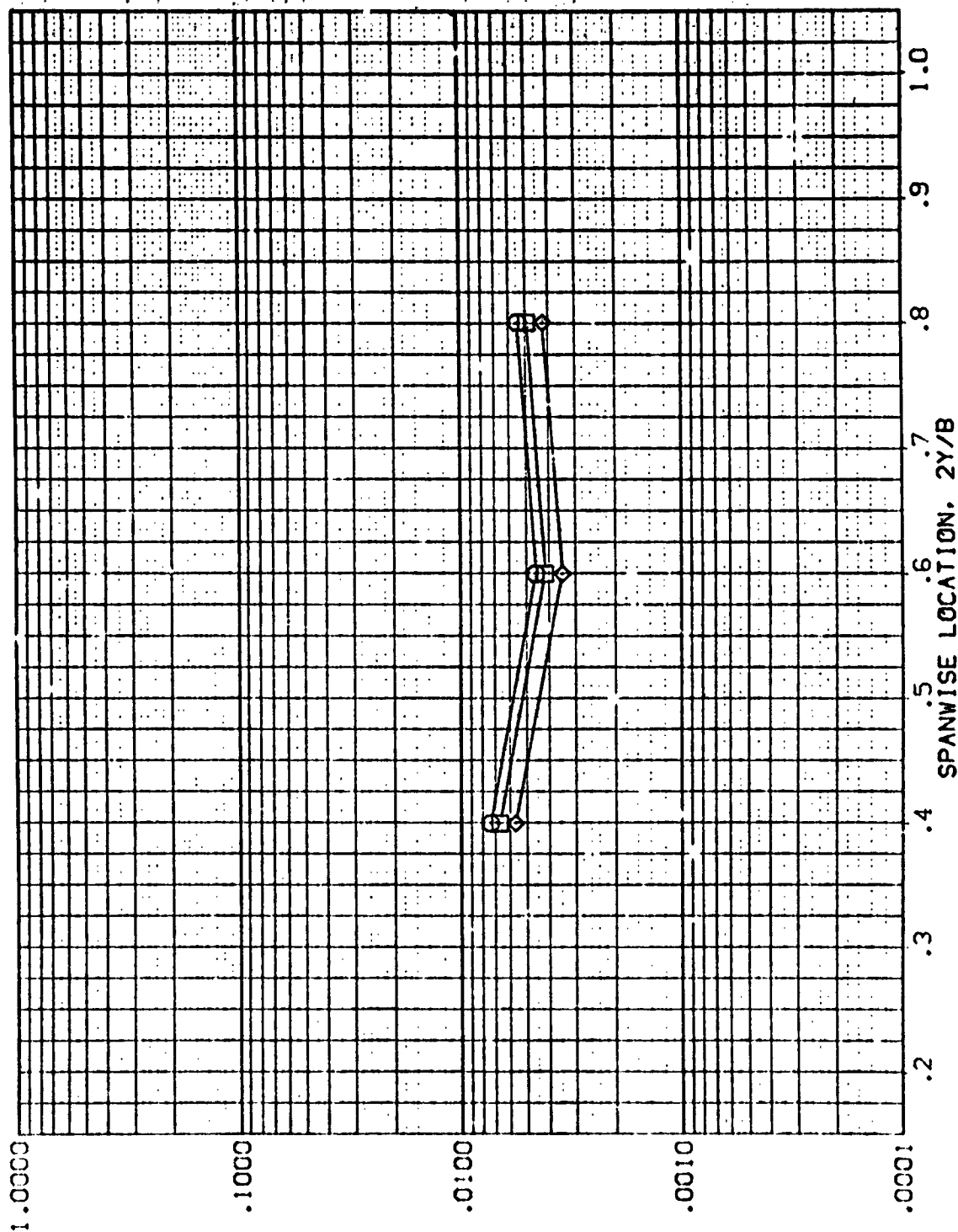


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

PARAMETRIC VALUES
 90.000 BETA
 1.000

ALPHA
 RN/L

MACH
 5.220

X/C
 .200

HAW/HT
 .850

SYMBOL
 ◇
 □
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

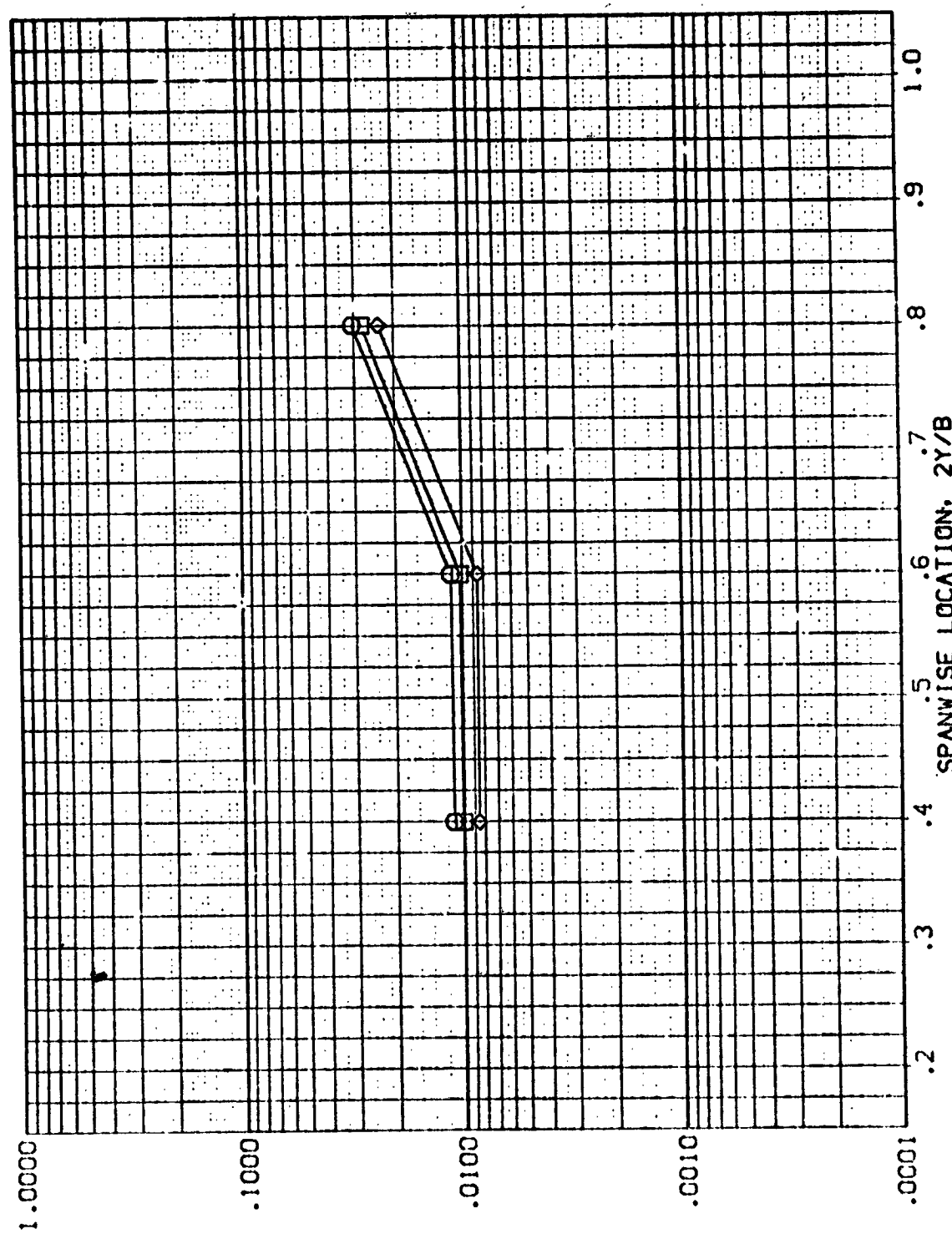


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV622)

SYMBOL	WAV/HT	X/C	MACH	ALPHA	PARAMETRIC VALUES
◇	.850	.400	5.220	RN/L	0.000
◇	.900				1.000
◇	1.000				

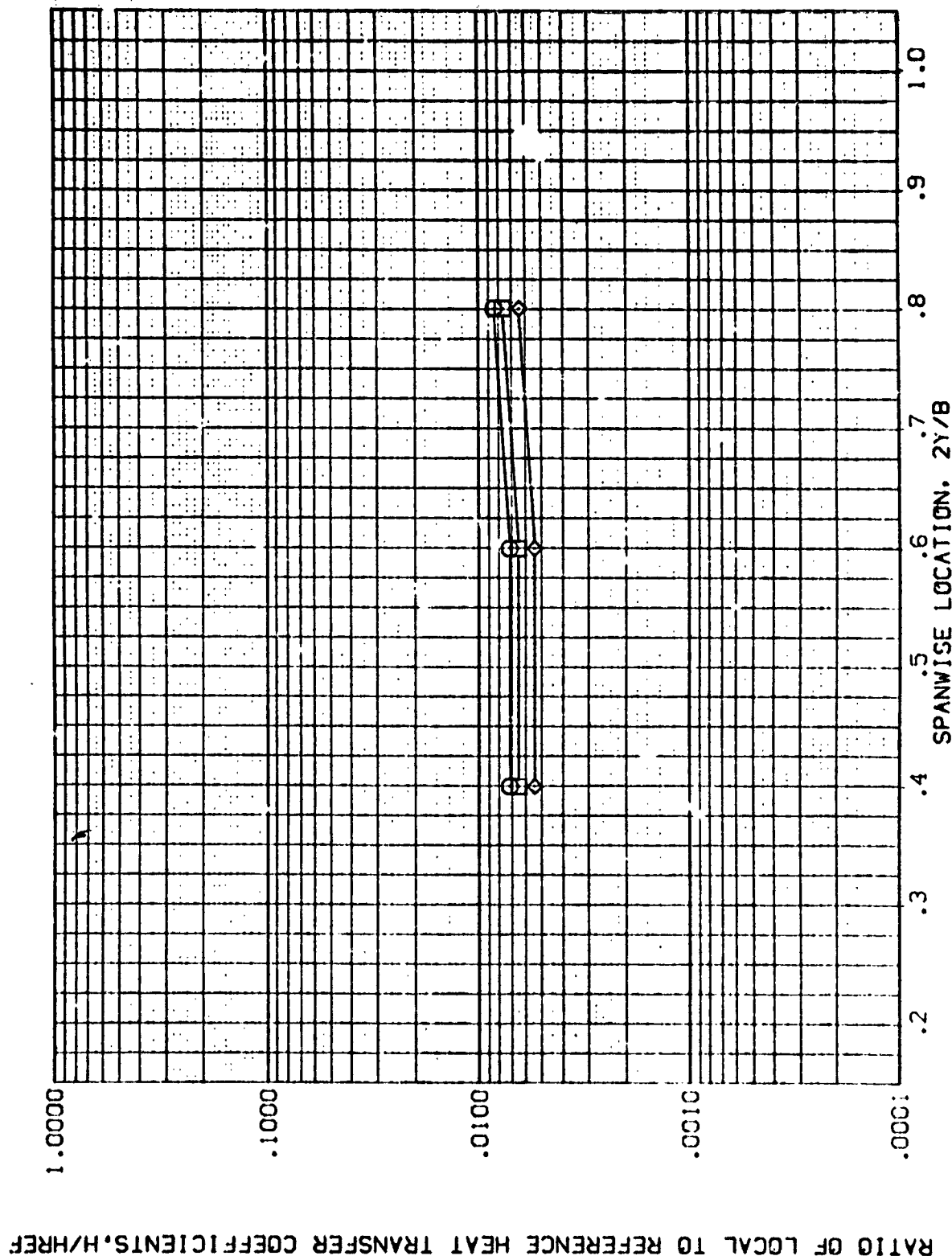


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AXES 3.5-195 IH28 01

WING UPPER SURFACE (REV G22)

WING UPPER SURFACE

PARAMETRIC VALUES
90.0°
BETA
1.00

ALPHA
RN/L

WING
X/C
MACH
5.220

WING
X/C
MACH
5.220

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

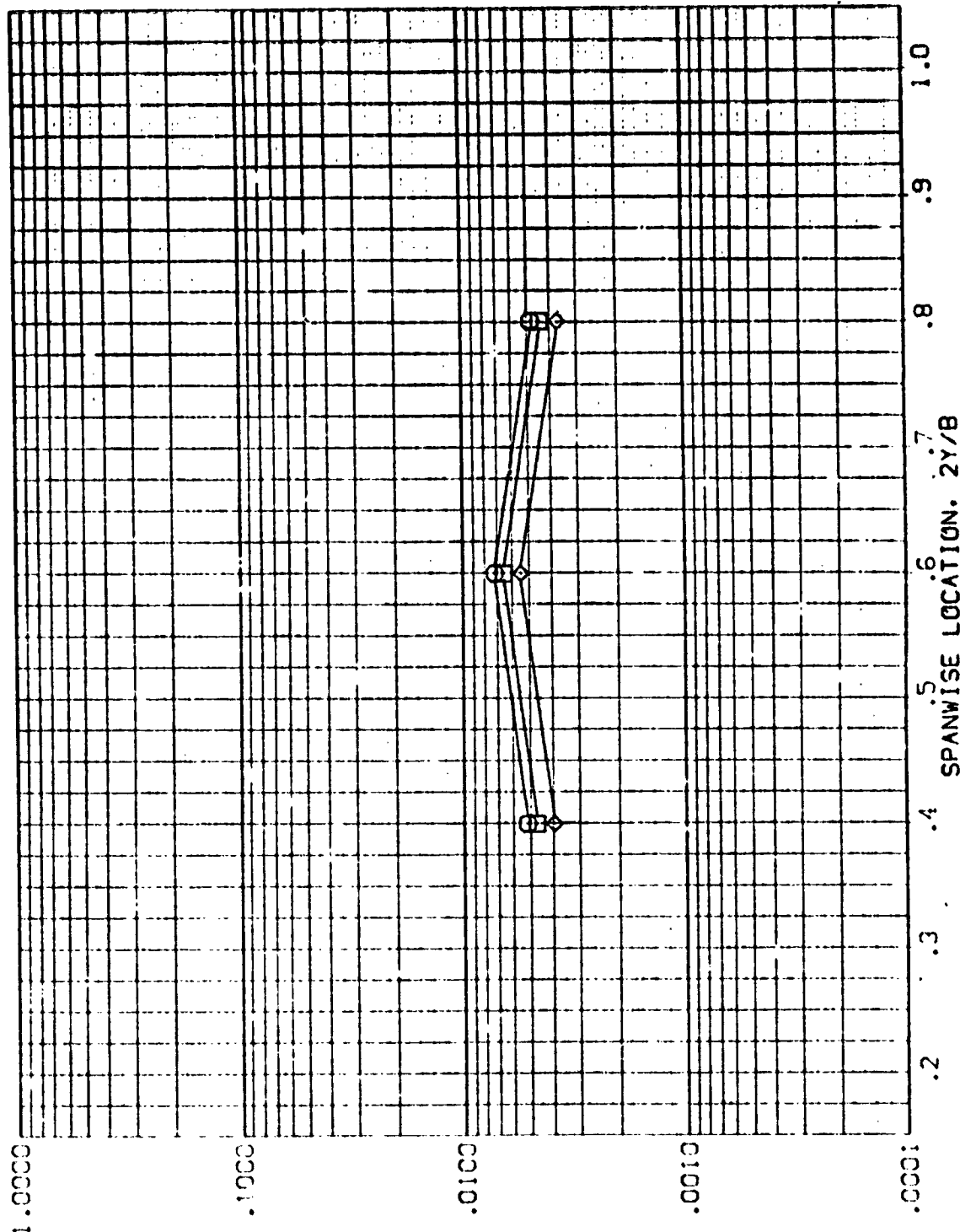


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G22)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
 α° .000 BETA .000
 RN/L 1.000

SYMBOL HAW/HT X/C MACH
 .850 .800 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

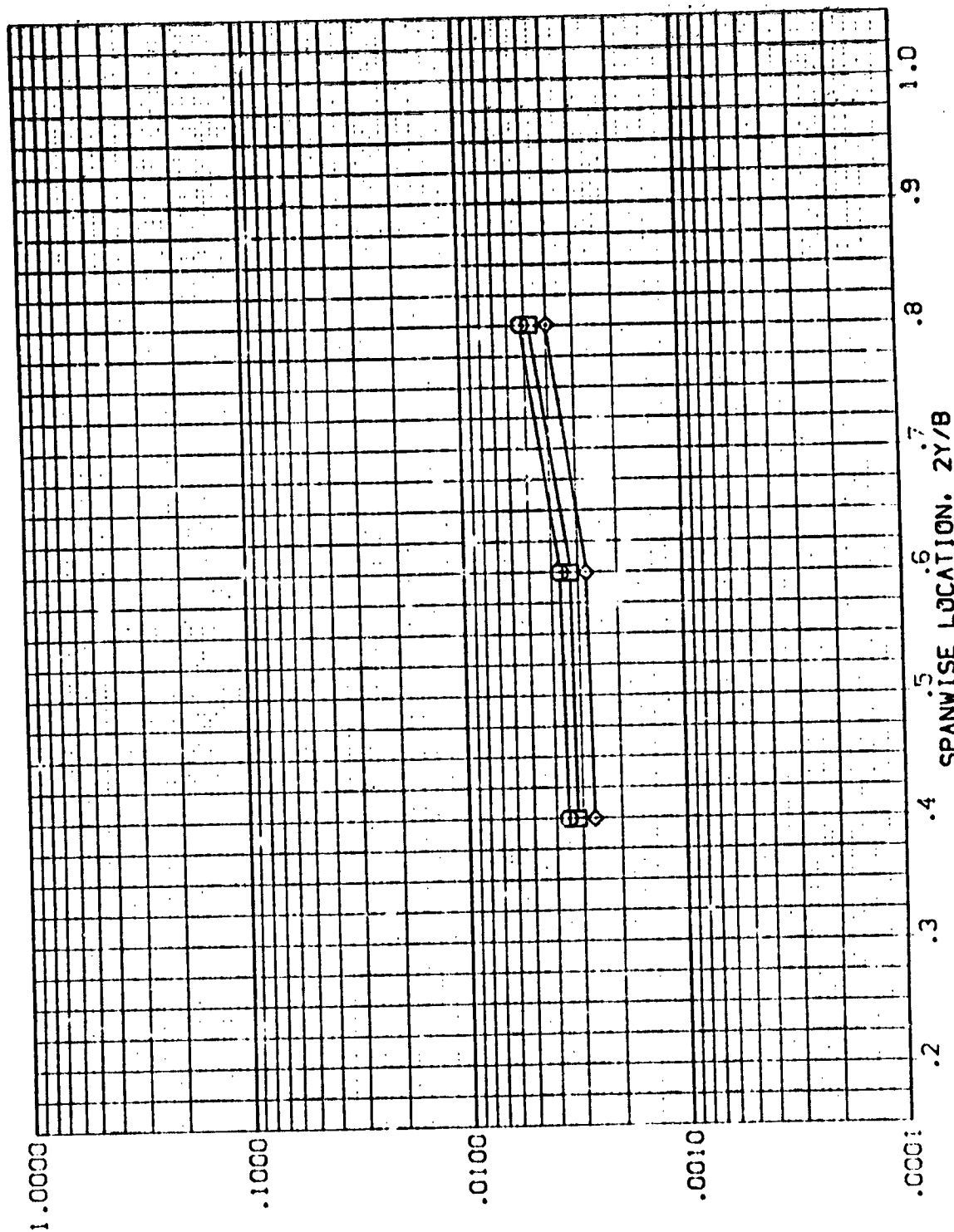


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

REV 6233

WING UPPER SURFACE

AMES 3.5-195 IH28 01

SYMBOL
◇
□
○

HAW/HT
.850
.900
1.000

X/C
.200

MACH
5.220

PARAMETRIC VALUES
ALPHA
RN/L
120.000
1.000
BETA
.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

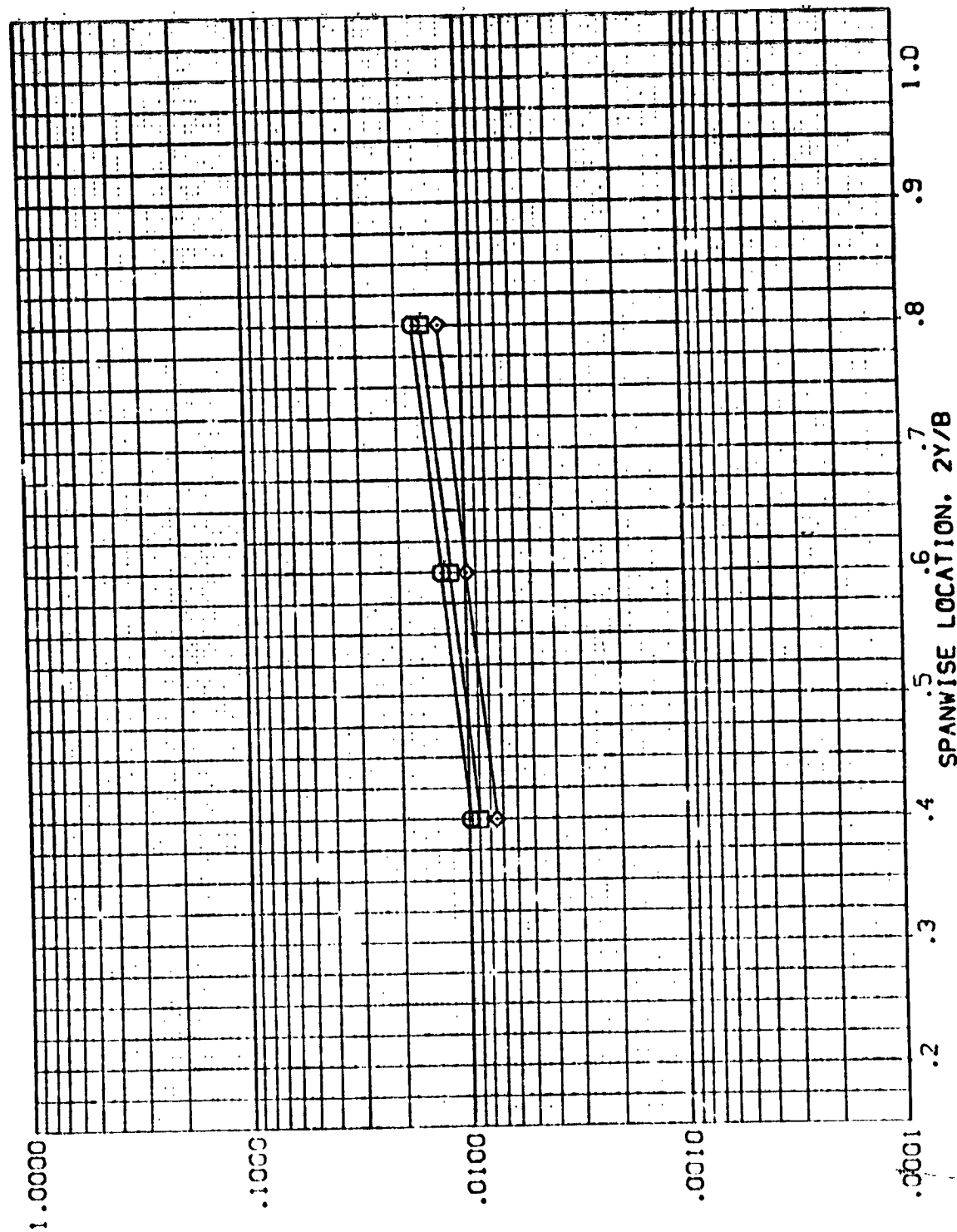


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G23)

WING UPPER SURFACE

AMES 3.5-195 1H28 01

PARAMETRIC VALUES

ALPHA
RN/L

120.000
1.000

BETA
1.000

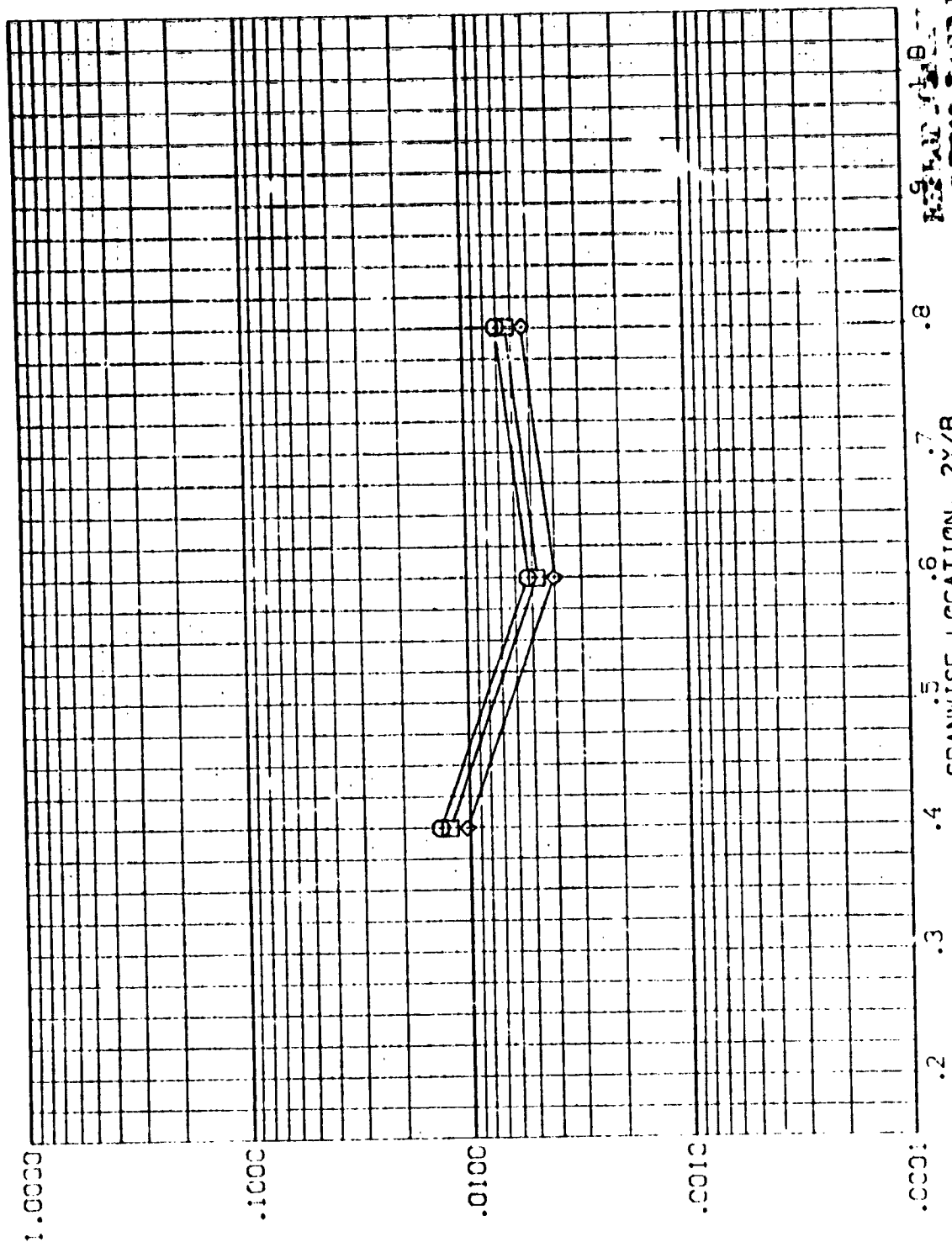
MA_∞/M₁ X/C MACH

.850 .400 5.220

.900

1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF



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SPANWISE LOCATION, 2Y/B

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G23)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
120.000 BETA .000
ALPHA
RN/L .06

MACH
5.220

X/C
.600

HAN/HT
.850

.900
1.000

SYMBOL
◇
□
○

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

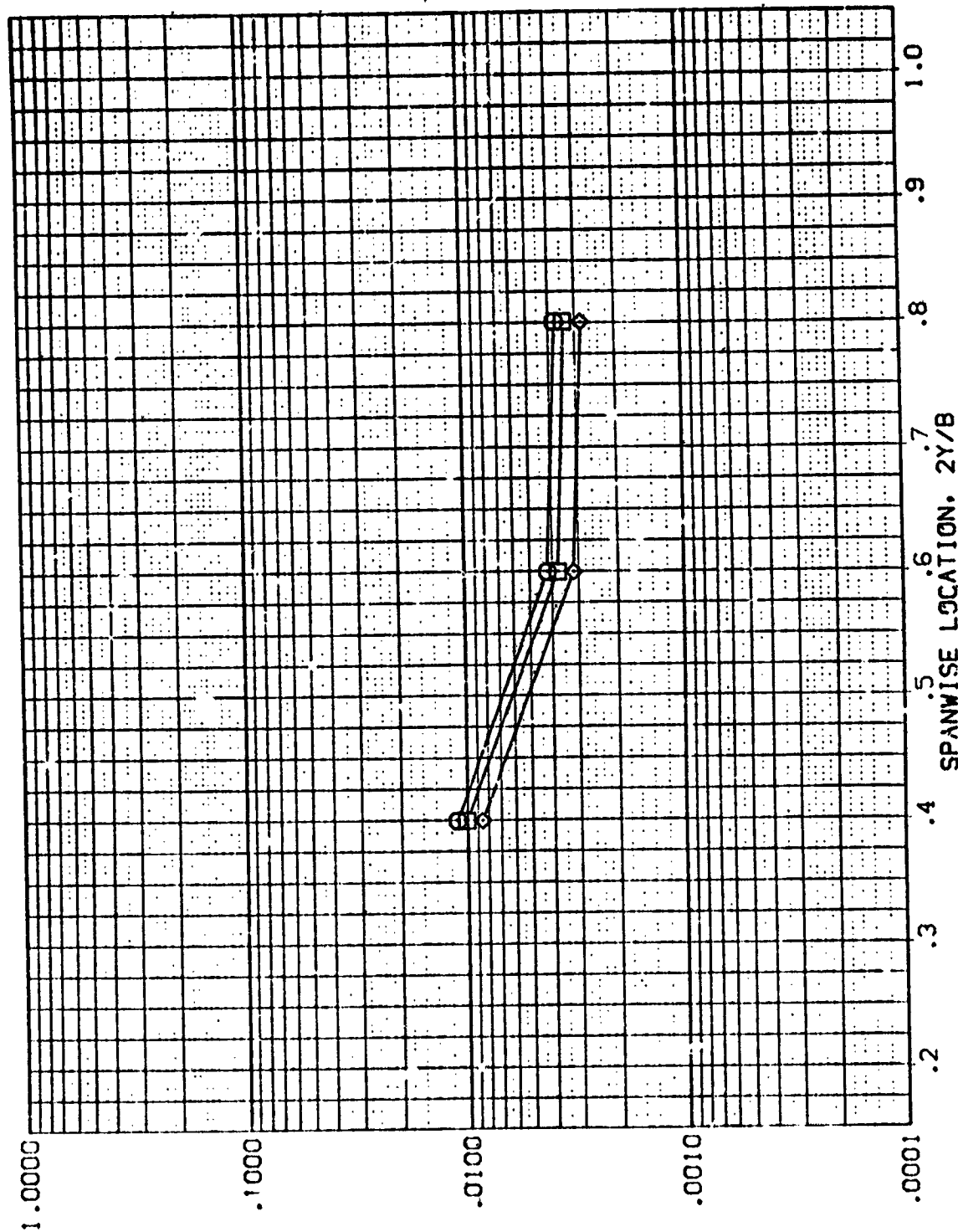


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV623)

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L 1.000

SYMBOL HAY/HT X/C MACH
 .850 .800 5.220
 .900
 1.000

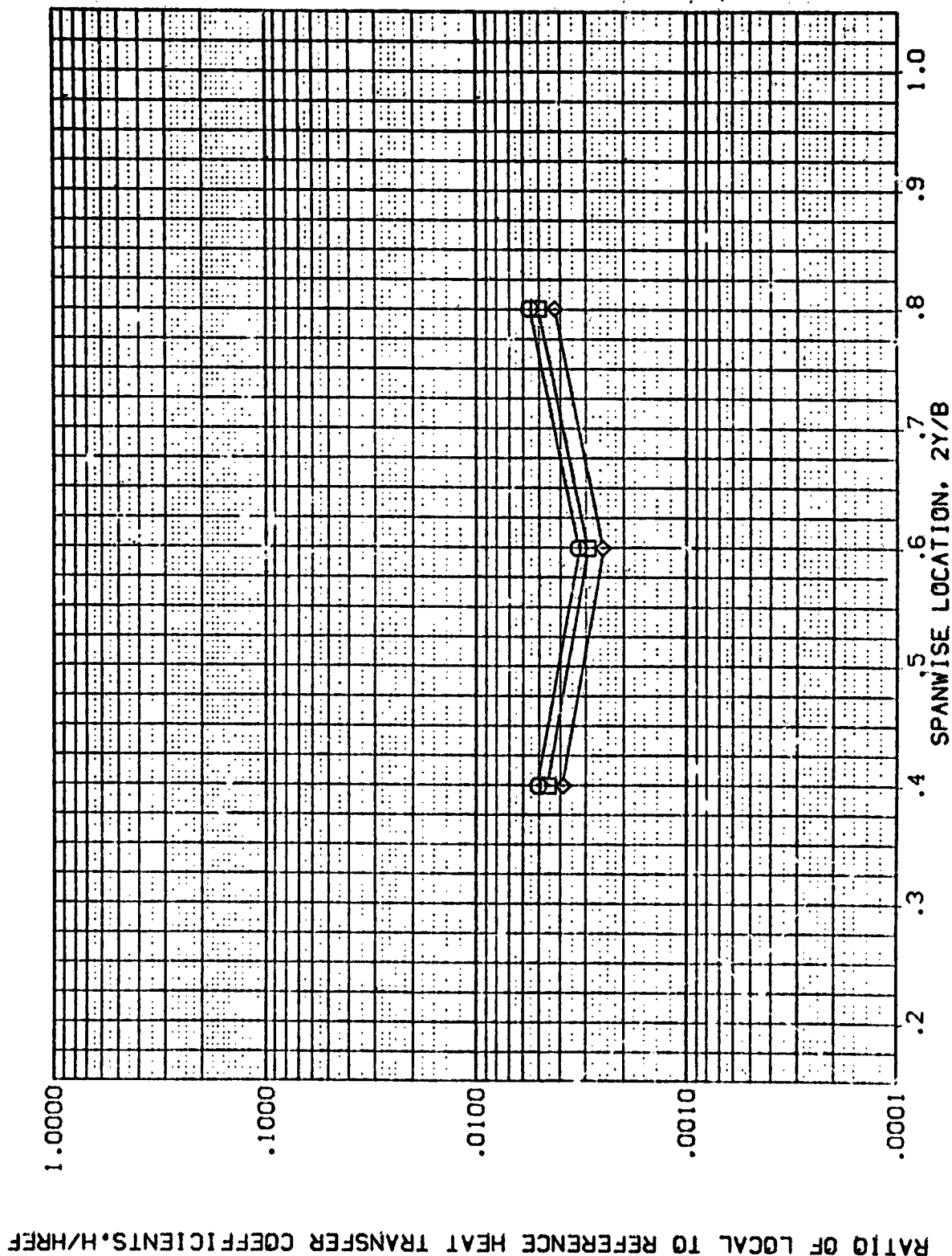


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REVG24)

WING UPPER SURFACE

AMES 3.5-195 1H28 01

SYMBOL HAW/HT X/C MACH
□ .850 .200 5.220
◇ .900
◇ 1.300

PARAMETRIC VALUES
ALPHA BETA
RN/L .000
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

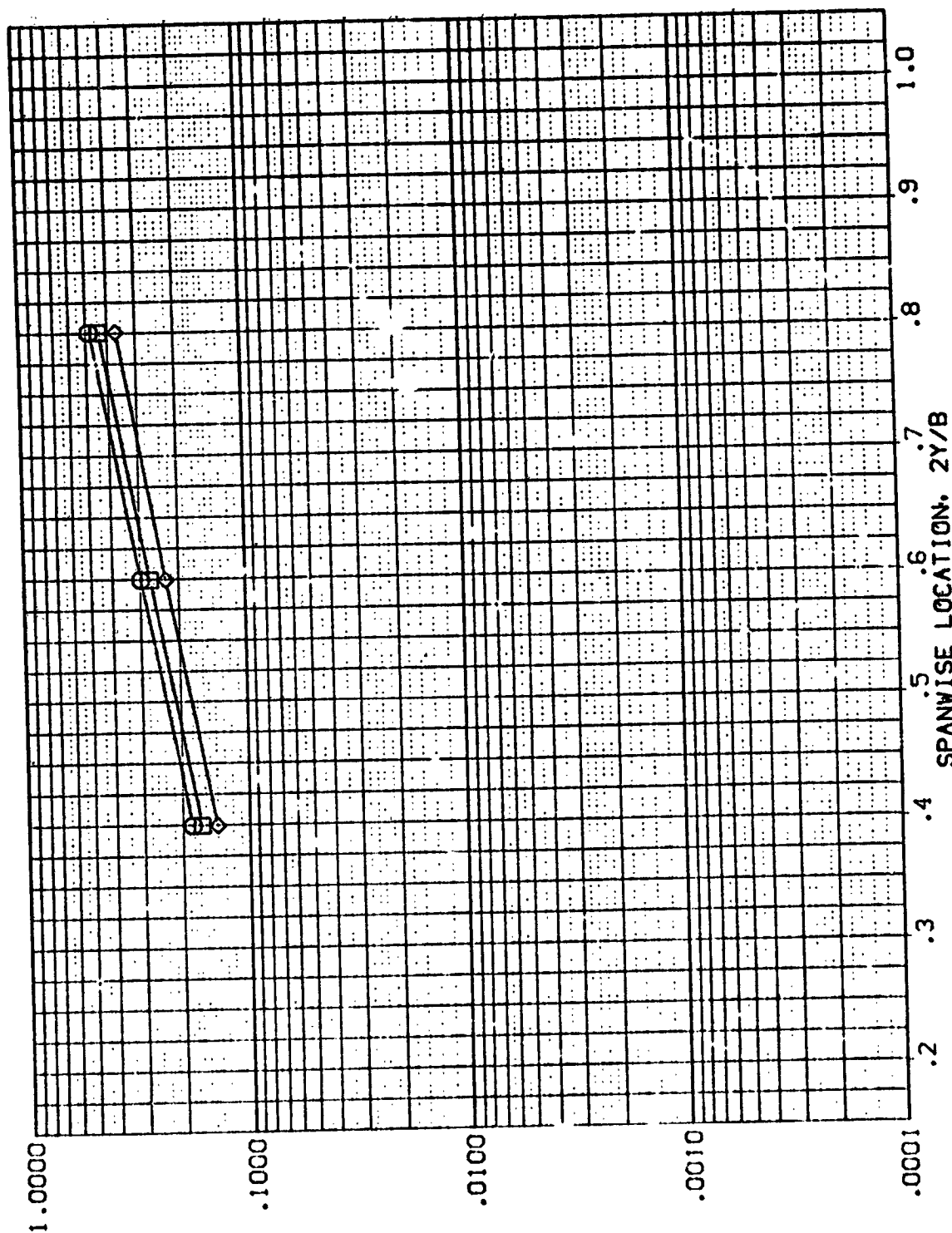


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG24)

PARAMETRIC VALUES

ALPHA -120.000 BETA .000
RN/L 1.000

SYMBOL HAW/HT X/C MACH

◇ .850 .400 5.220
□ .900
○ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

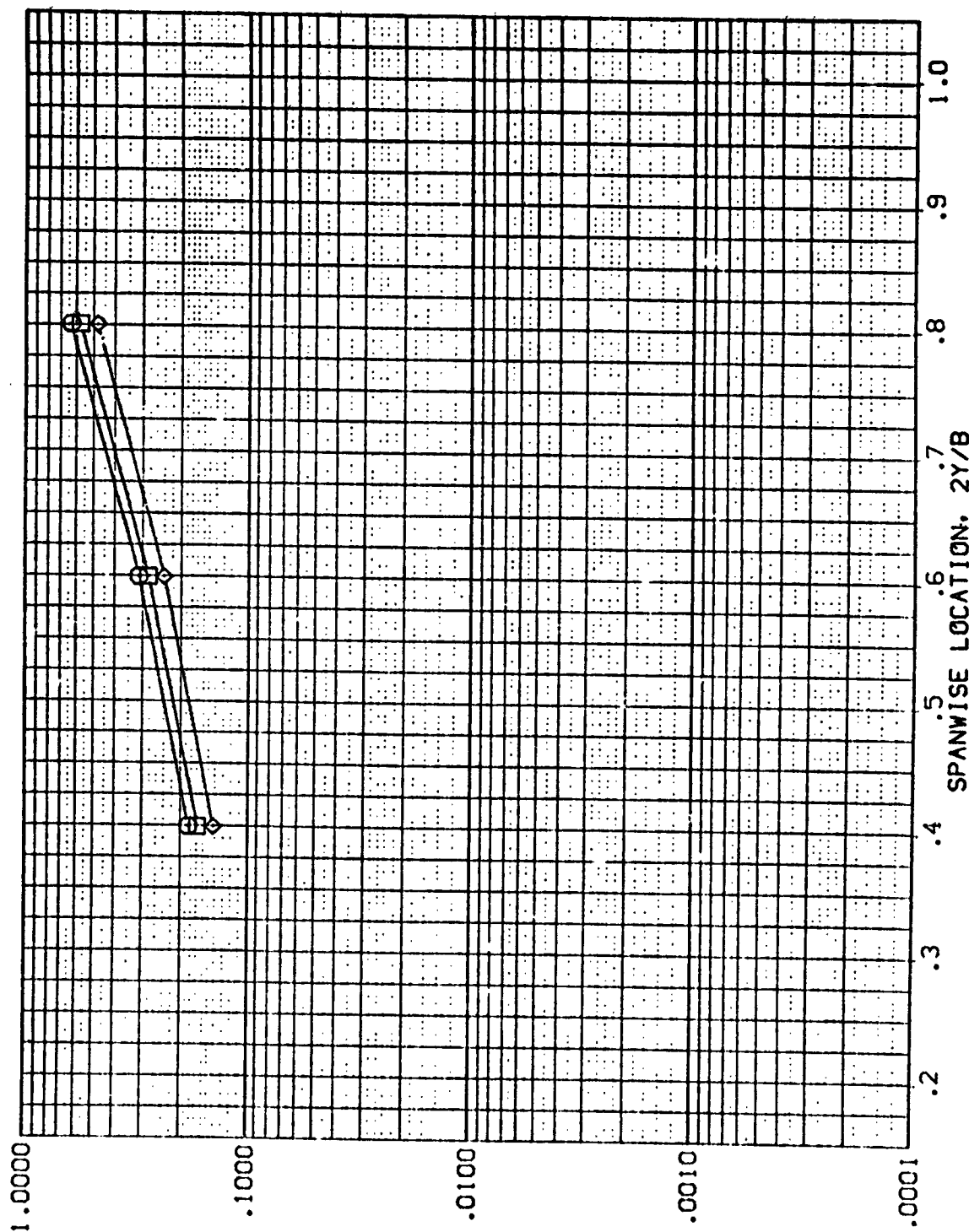


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G24)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

SYMBOL
◇
□
○

HAW/HT
.850
.900
1.000

X/C
.600

MACH
5.220

PARAMETRIC VALUES
ALPHA
RN/L
-120.000
1.000
BETA
.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

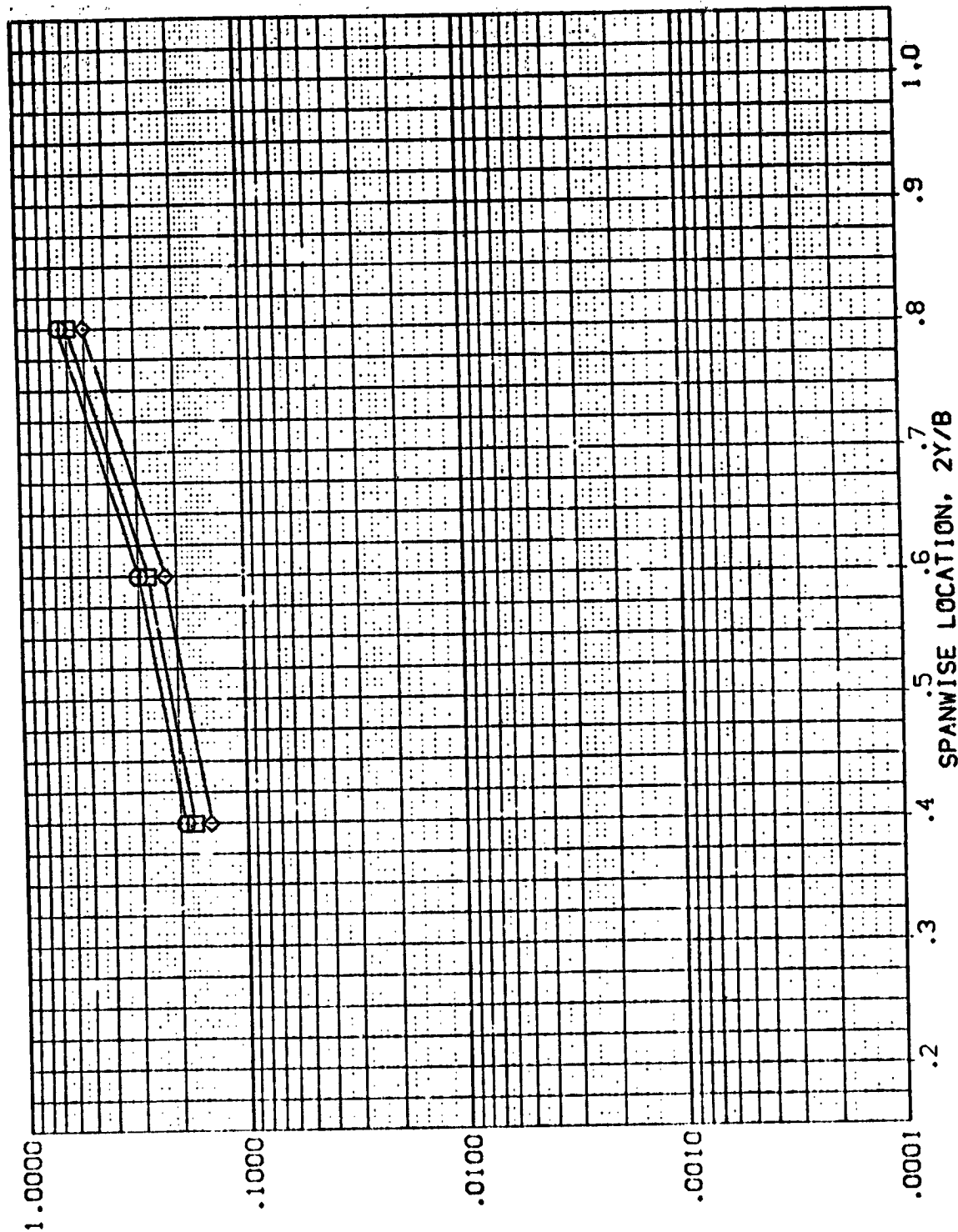


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G24)
 SYMBOL HAW/HT X/C MACH
 ◇ .850 .800 5.220
 □ .900
 1.000

PARAMETRIC VALUES
 ALPHA -1.000
 RN/L 1.000 BETA .000

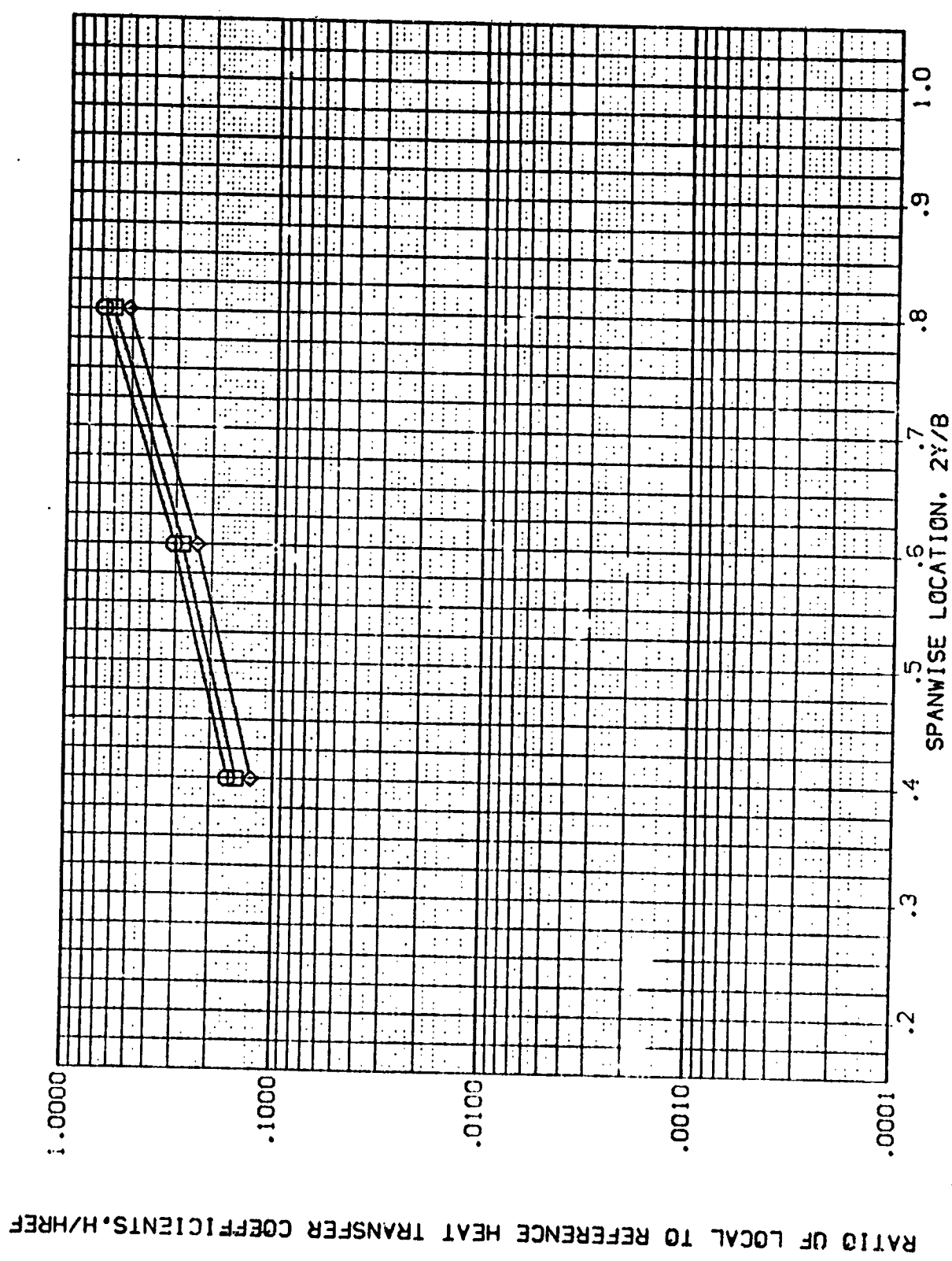


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G25)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

MAV/HT .850
X/C .200
MACH 5.219

PARAMETRIC VALUES
-90.000 BETA
1.000

ALPHA
RN/L

SYMBOL
◇
□

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

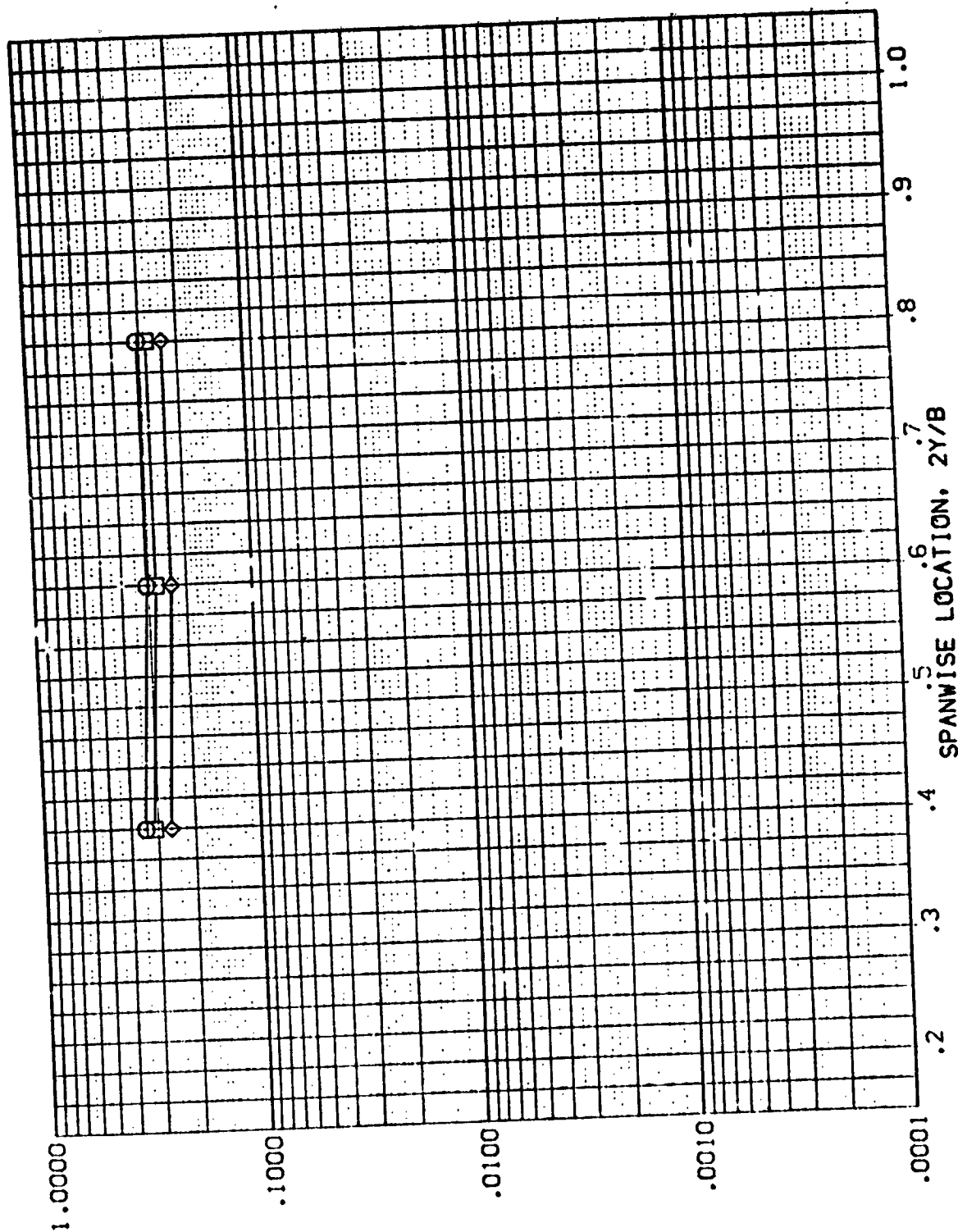


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

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AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
○	.850	.400	5.219	-90.000	.000
□	.900			1.000	
◇	1.000				

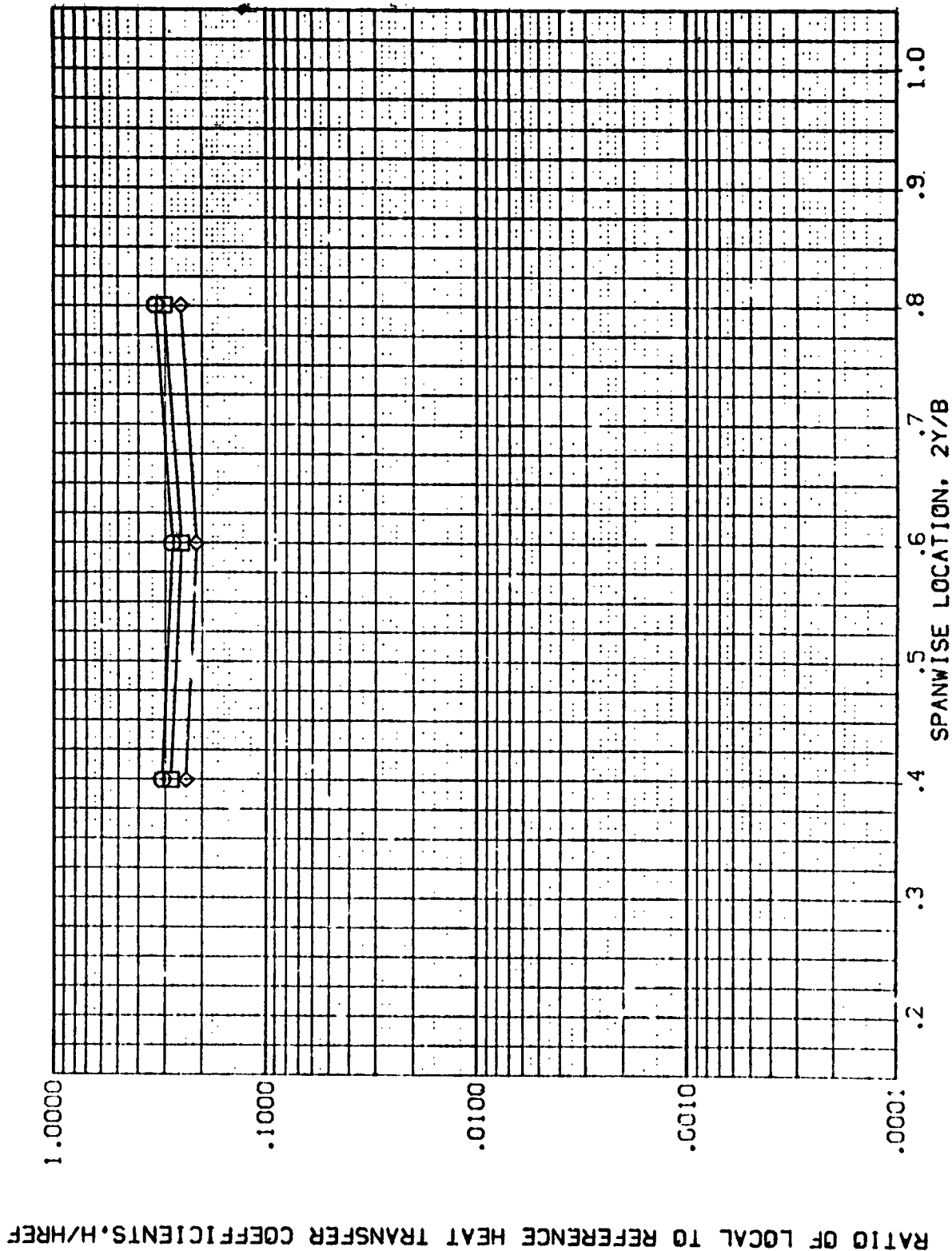


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G25)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
-90.080 BETA
1.000

ALPHA
RV/L

MACH
5.219
X/C
.600
HAW/HT
.850
.900
1.000

SYMBOL
◇
□

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

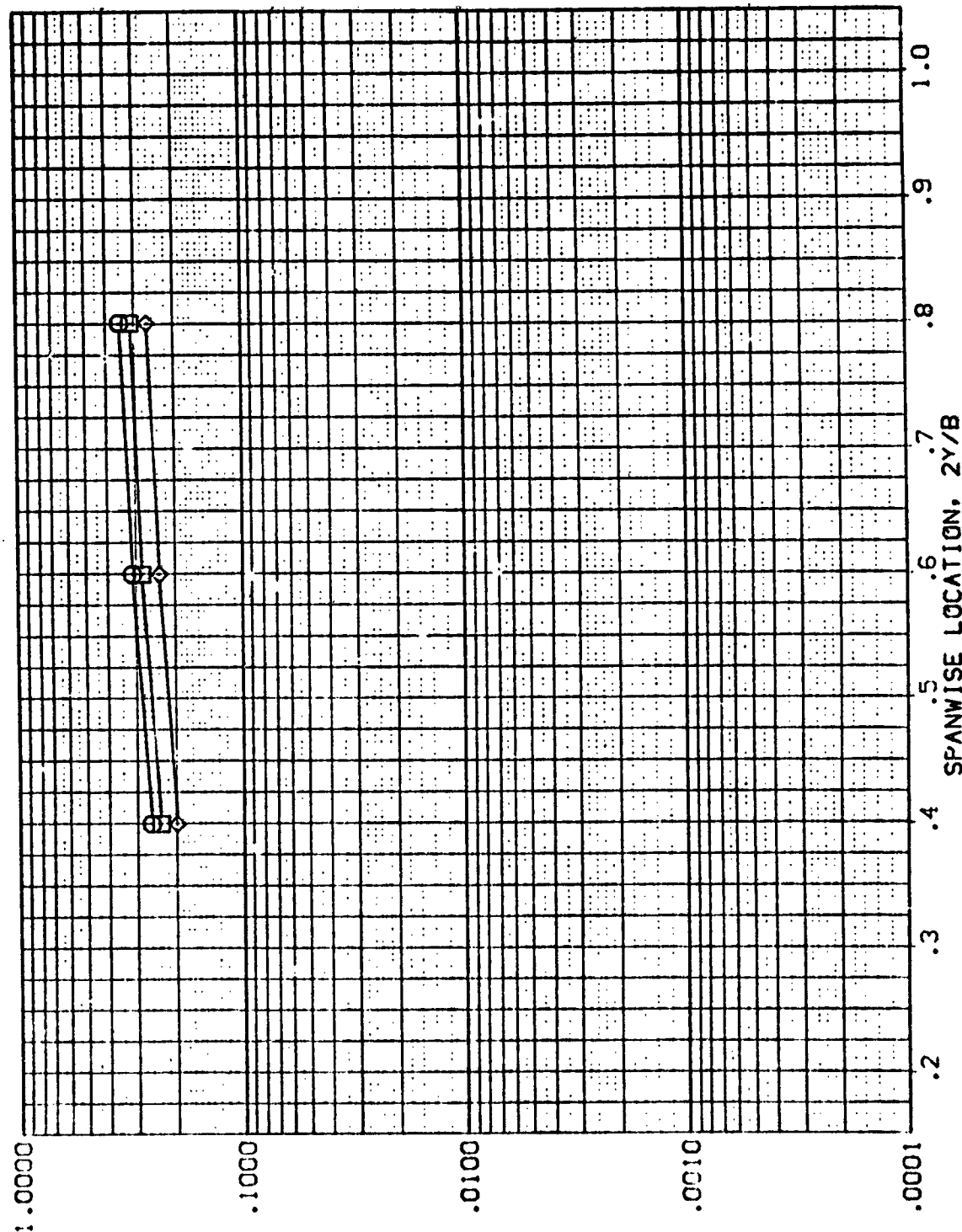


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV625)

PARAMETRIC VALUES
-90 .000 BETA .000
1.000

ALPHA
RN/L

SYMBOL MACH X/C MACH
◇ .850 .800 5.219
□ .933
○ 1.030

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

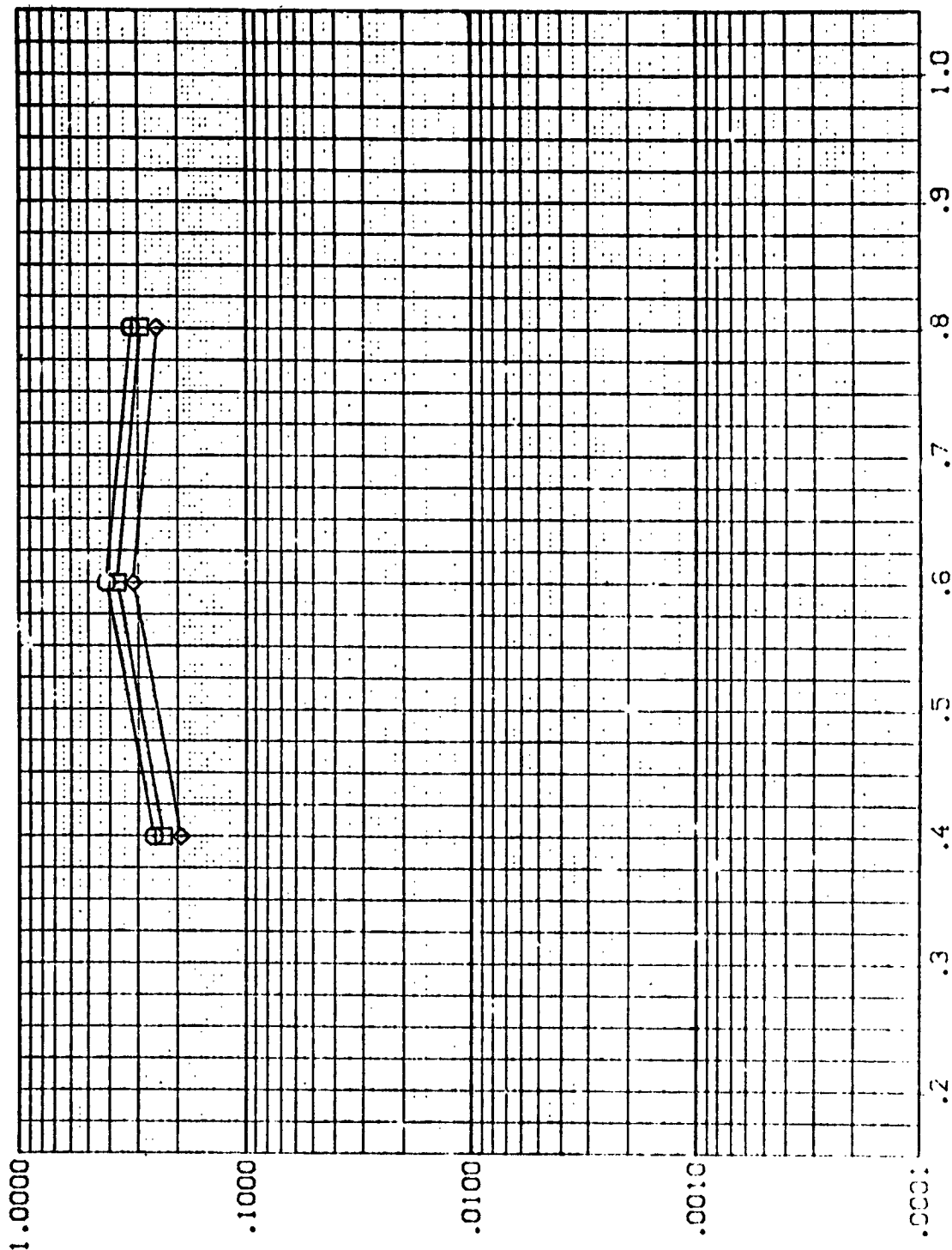


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV626)

WING UPPER SURFACE

AMES 3.5-195 1H28 01

PARAMETRIC VALUES
-60.000 BETA
1.000

ALPHA
RN/L

MACH
5.220

X/C
.200

HAW/HT
.950
.900
1.000

SYMBOL
◇
□
○

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

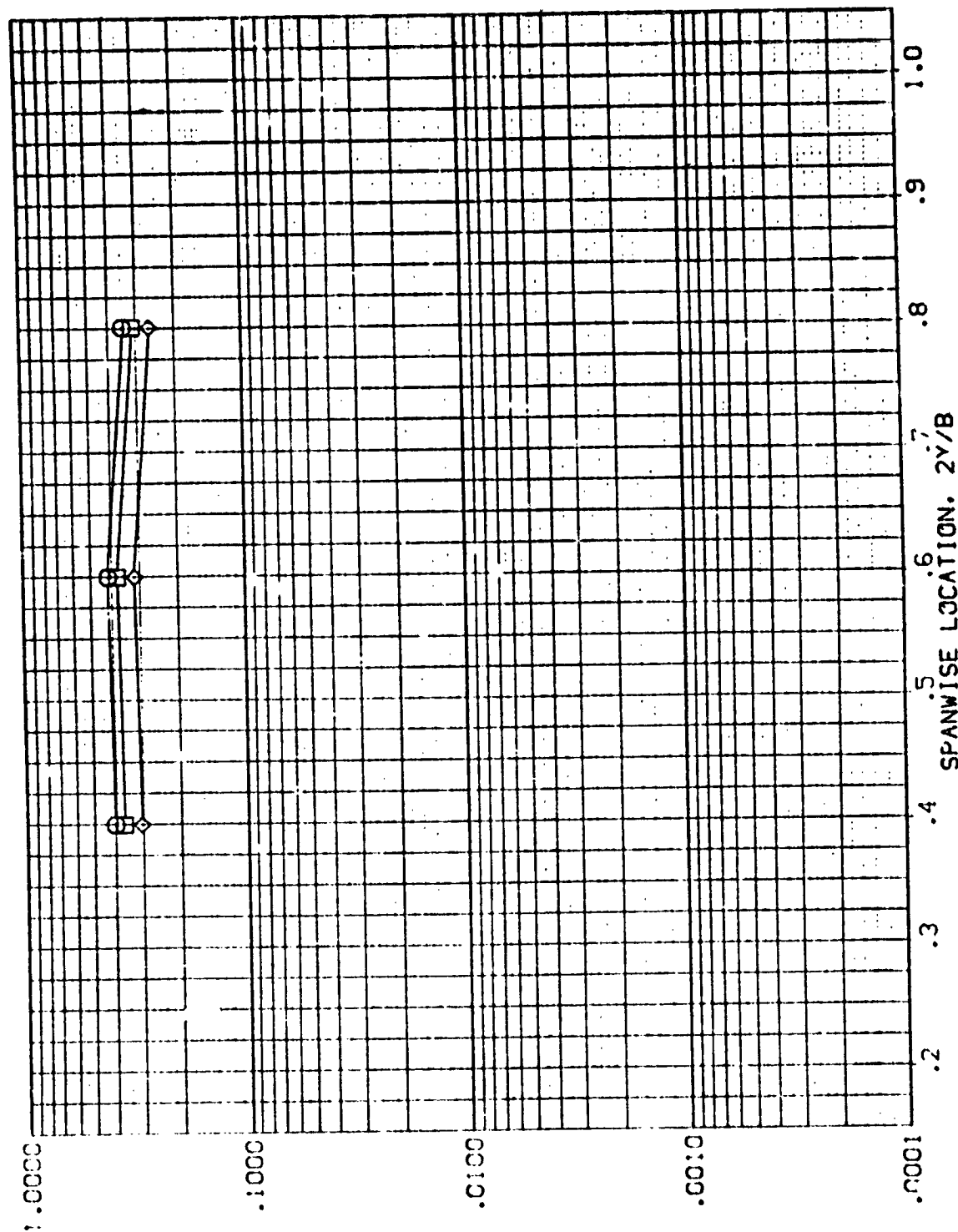


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G26)

PARAMETRIC VALUES
 -60.000 BETA
 1.000

ALPHA
 RN/L

MACH
 5.220

SYMBOL
 HAW/HT
 .850
 .900
 1.000

X/C
 .400

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

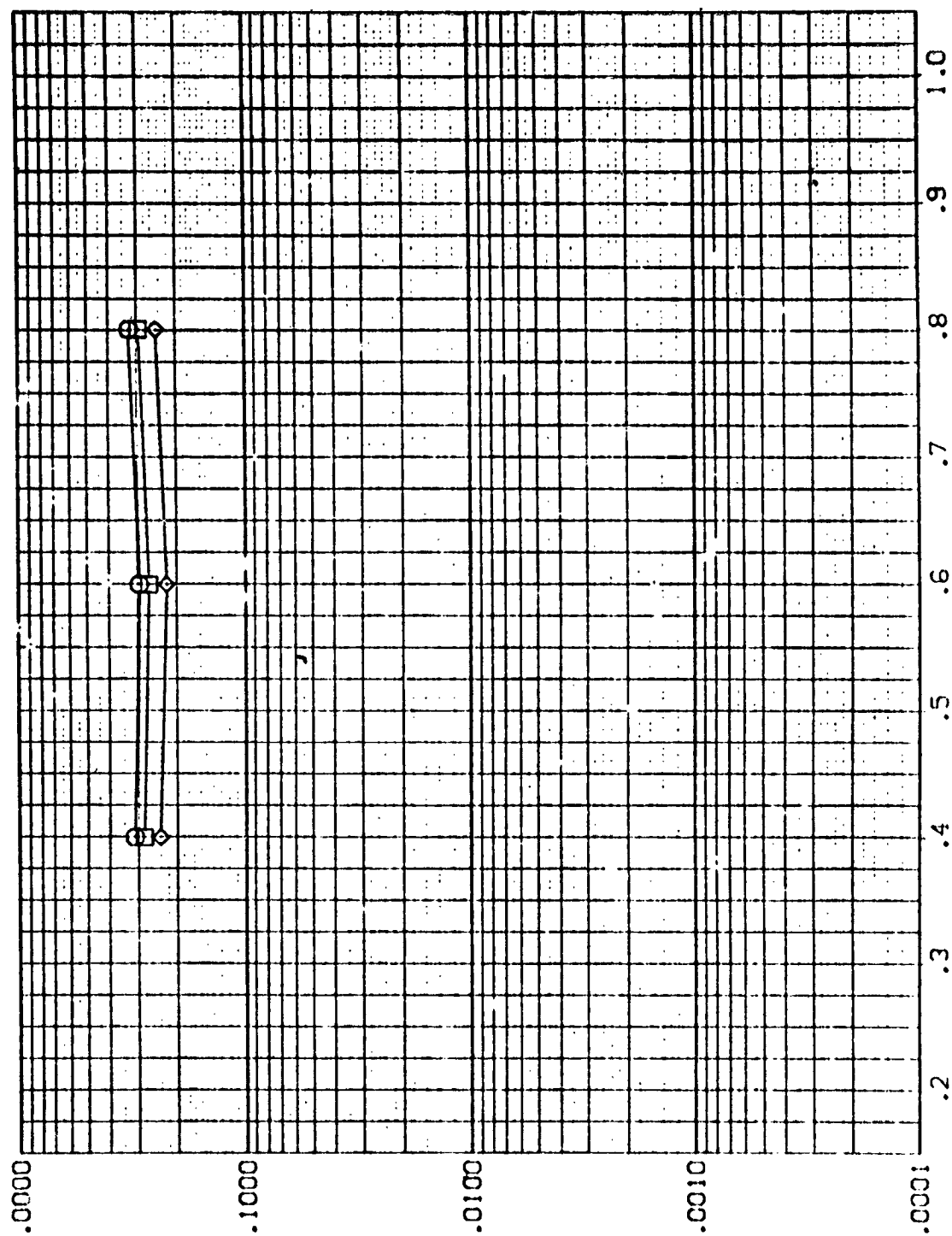


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G26)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

SYMBOL
□
◇

HAW/HT
.850
.900
1.000

X/C
.600

MACH
5.220

PARAMETRIC VALUES
ALPHA
RN/L

-60.000
1.000

BETA

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

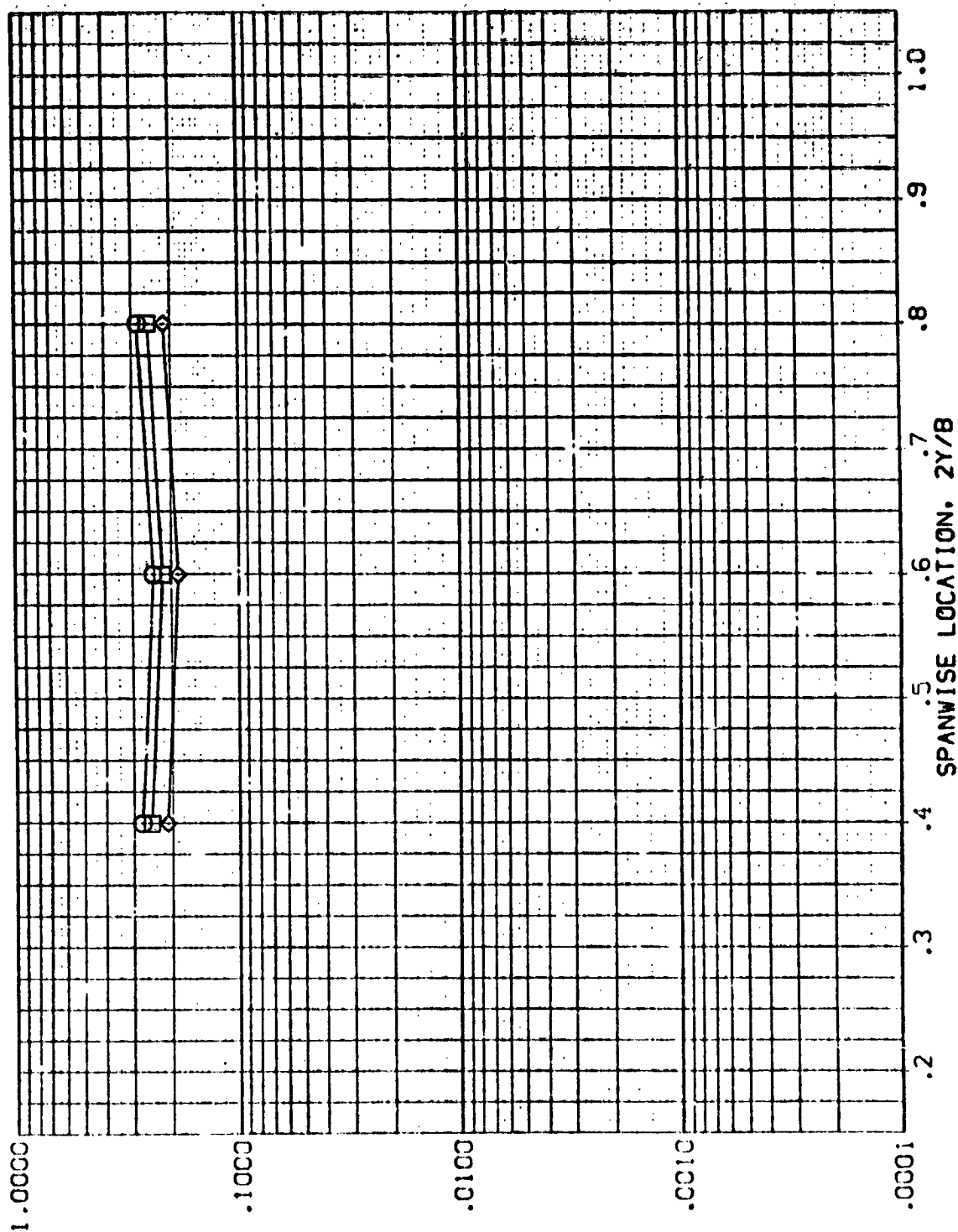


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G26)

WING UPPER SURFACE

AMES 3.5-195 IH28 01

SYMBOL
◇
□
○

WING/HT .850
X/C .800
MACH 5.220

PARAMETRIC VALUES
ALPHA
RHU/L
-60.000
BETA
1.0000

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

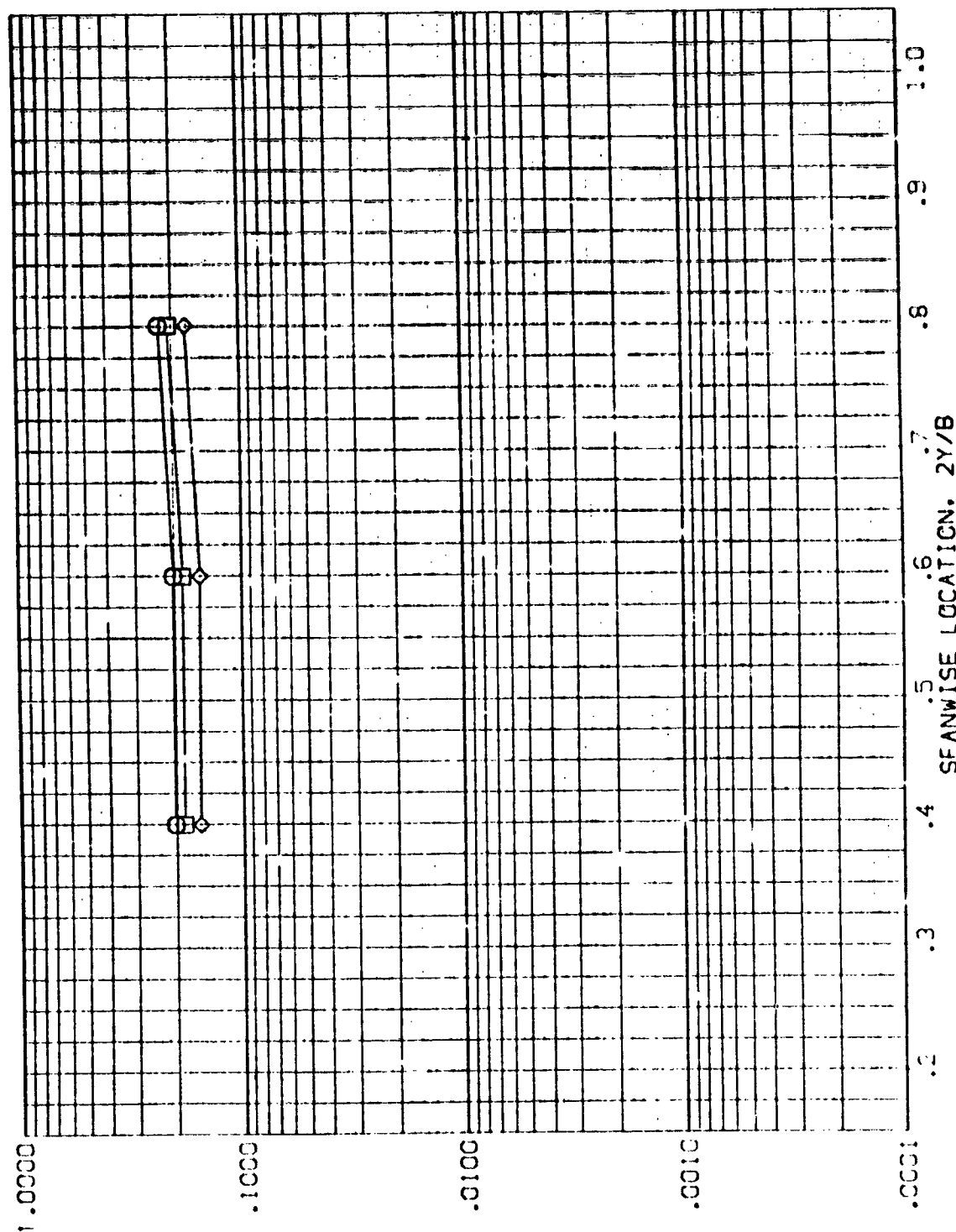


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

(REV G27)

WING UPPER SURFACE

AMES 3.5-195 1H28 01

PARAMETRIC VALUES
-30.000 BETA .000
1.000

ALPHA
RN/L

MACH
5.220

X/C
.200

HAN/HT
.850
.900
1.000

SYMBOL
□
◇

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

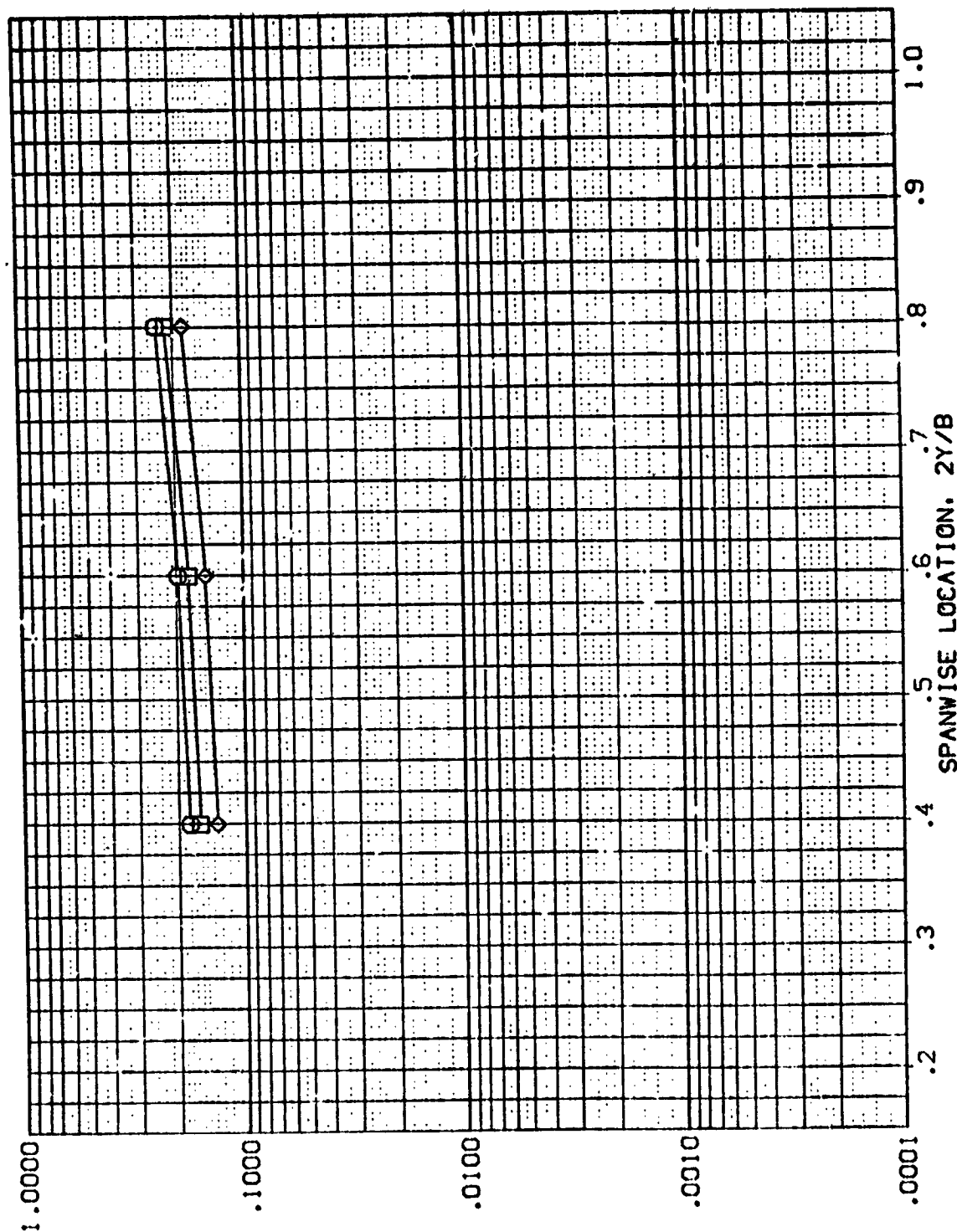


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV G27)

SYMBOL \square \diamond
 HAN/HT .850
 X/C .400
 MACH 5.220

PARAMETRIC VALUES
 ALPHA RN/L
 BETA 1.000
 .000

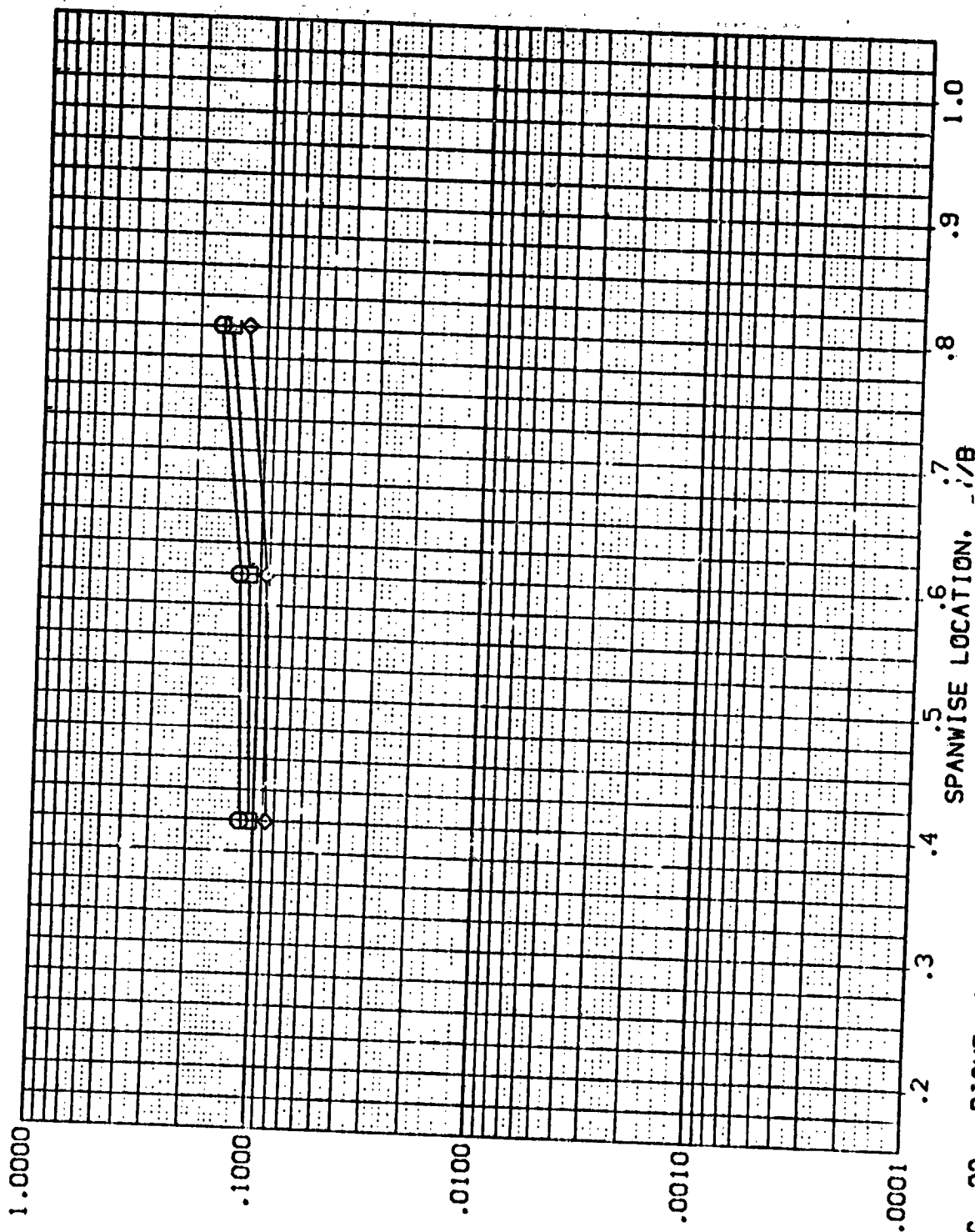


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

SYMBOL
◇
□
◇

HA/WHT .850
.900
1.000

X/C .600

MACH 5.220

PARAMETRIC VALUES
ALPHA -30.000
RN/L 1.000
BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

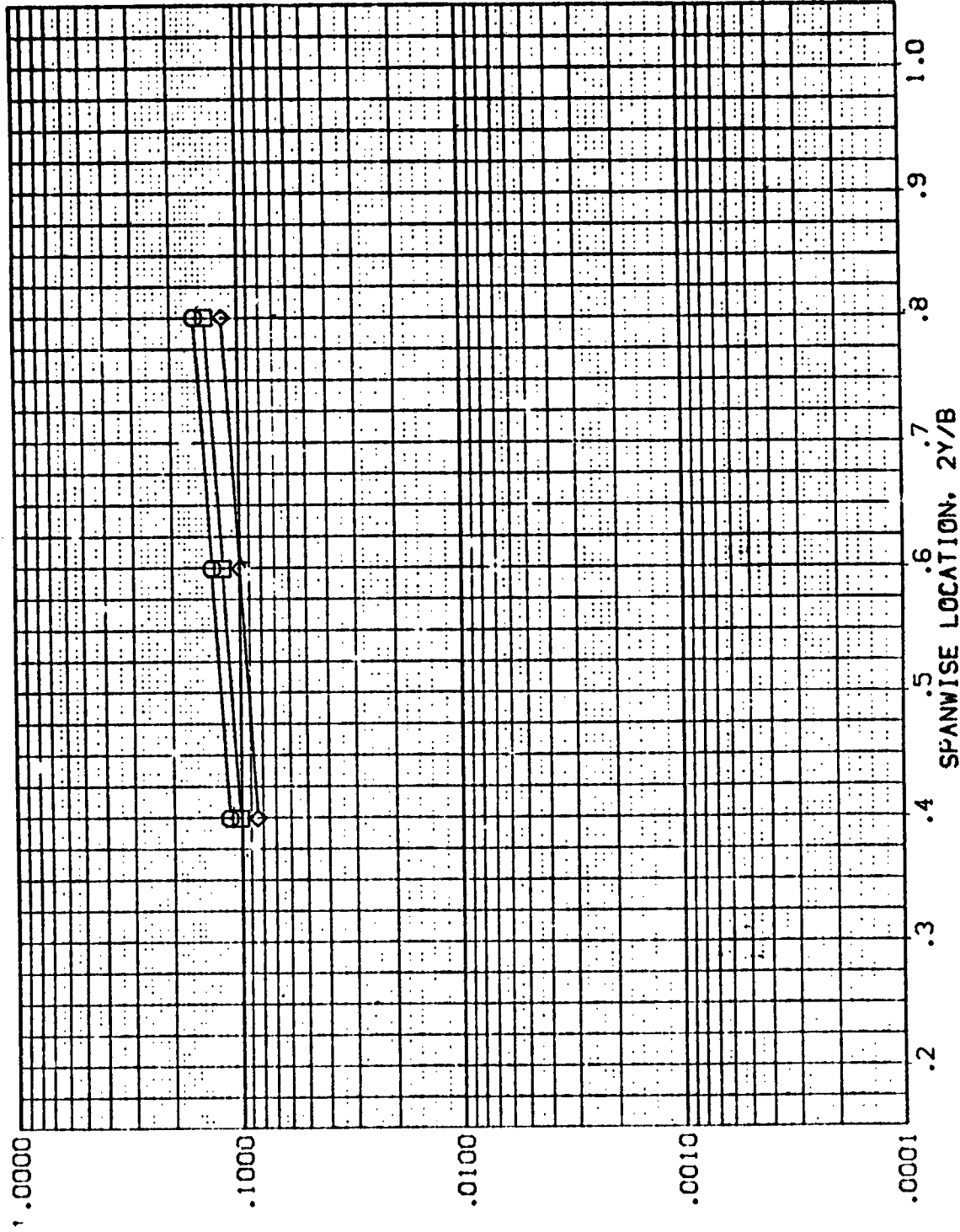


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

AMES 3.5-195 1H28 01 WING UPPER SURFACE (REV627)

SYMBOL \square \diamond

HAW/HT .850 .900 1.000

X/C .800

MACH 5.220

PARAMETRIC VALUES

ALPHA RN/L

BETA

.000

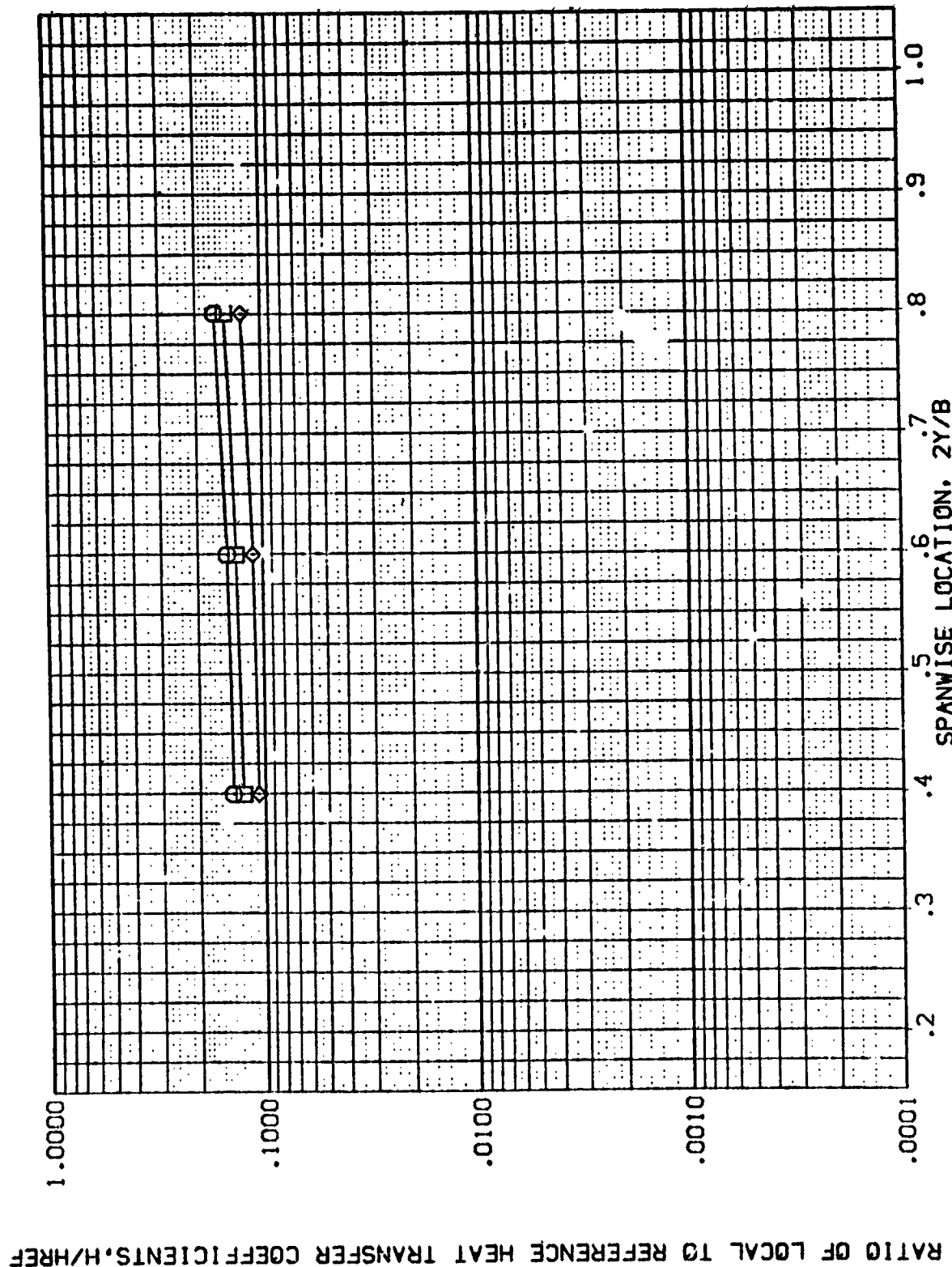


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REV619)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	.000	.000	1.000
(REV620)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	30.080	.000	1.000
(REV621)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	60.000	.000	1.000
(REV622)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	90.000	.000	1.000
(REV623)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	120.000	.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

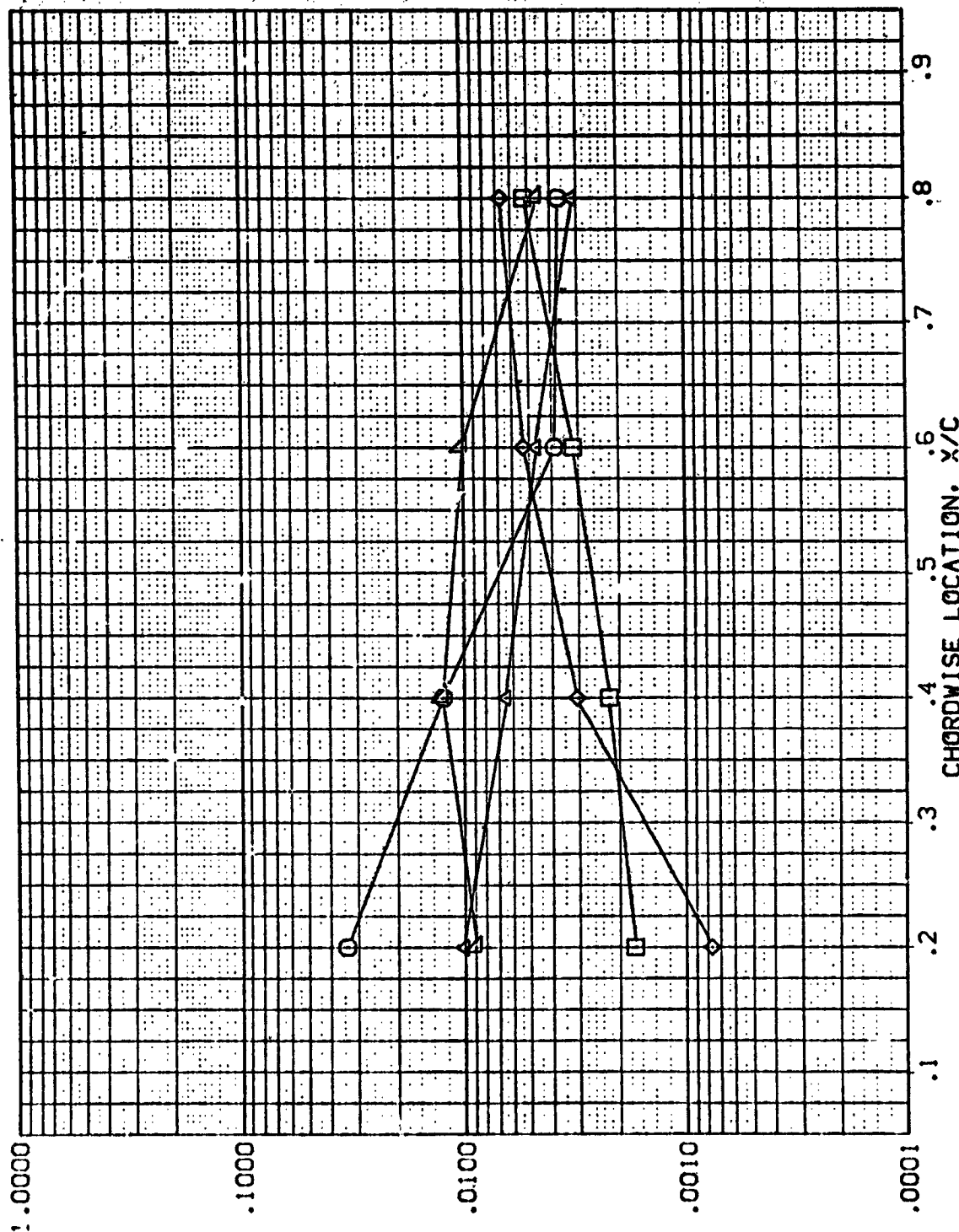


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 2Y/B = .400

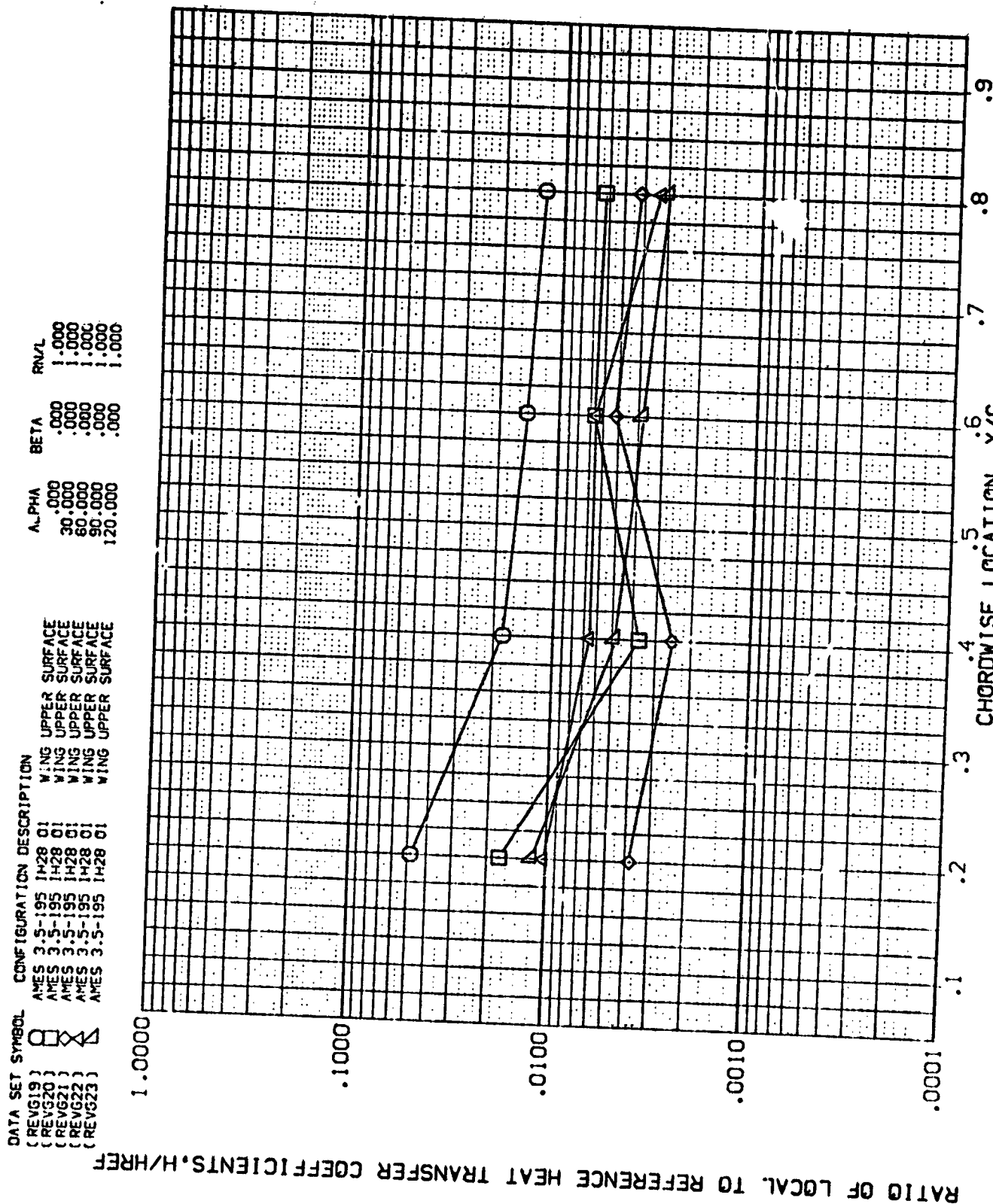


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 $h_{AW}/h_T = .900$ $2Y/B = .600$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RM/L
(REV619)	AMES 3.5-195 1428 01 WING UPPER SURFACE	.000	.000	1.000
(REV620)	AMES 3.5-195 1428 01 WING UPPER SURFACE	30.000	.000	1.000
(REV621)	AMES 3.5-195 1428 01 WING UPPER SURFACE	60.000	.000	1.000
(REV622)	AMES 3.5-195 1428 01 WING UPPER SURFACE	90.000	.000	1.000
(REV623)	AMES 3.5-195 1428 01 WING UPPER SURFACE	120.000	.000	1.000

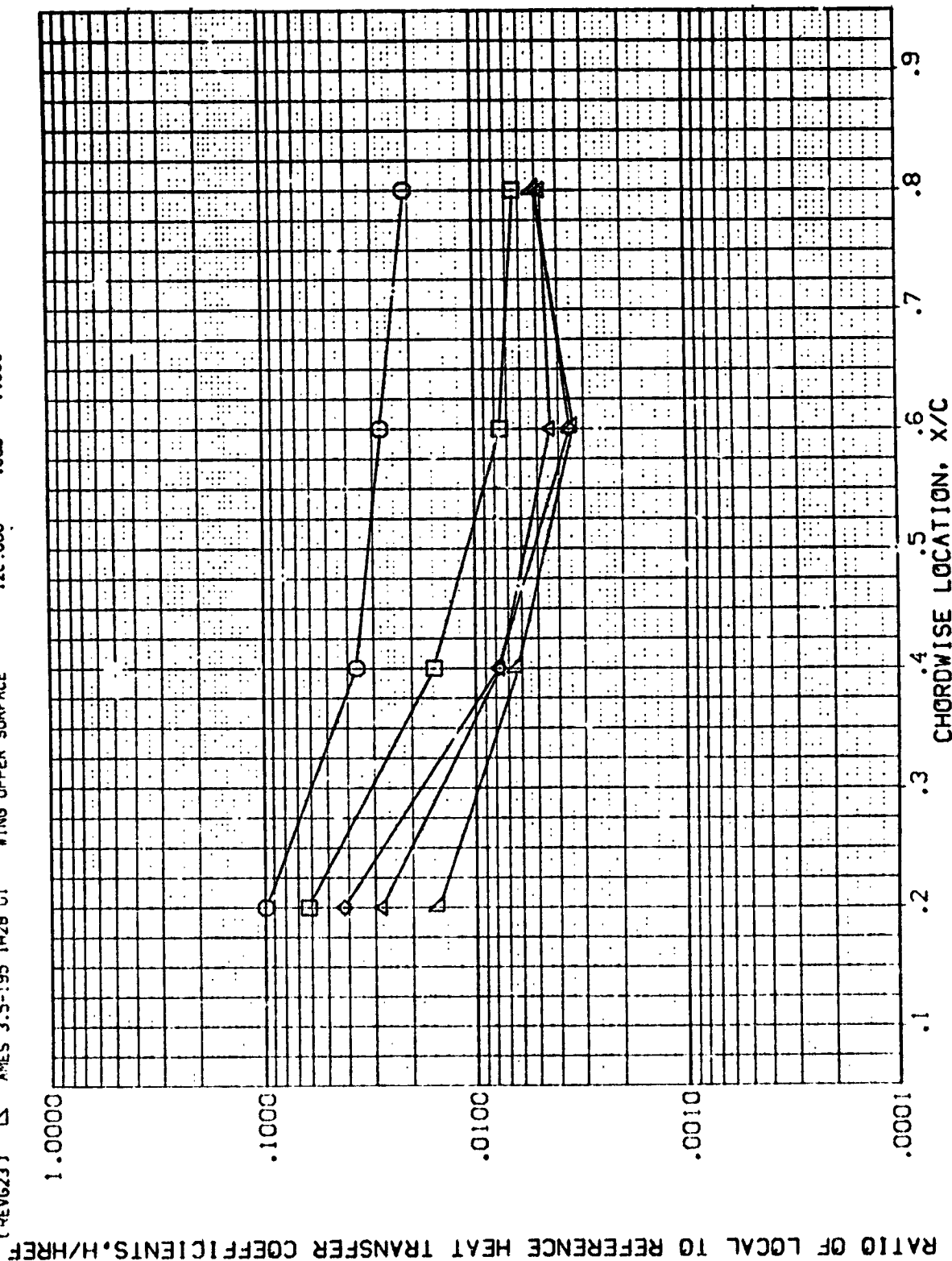


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 $h_{AW}/h_T = .900$ $2Y/B = .800$

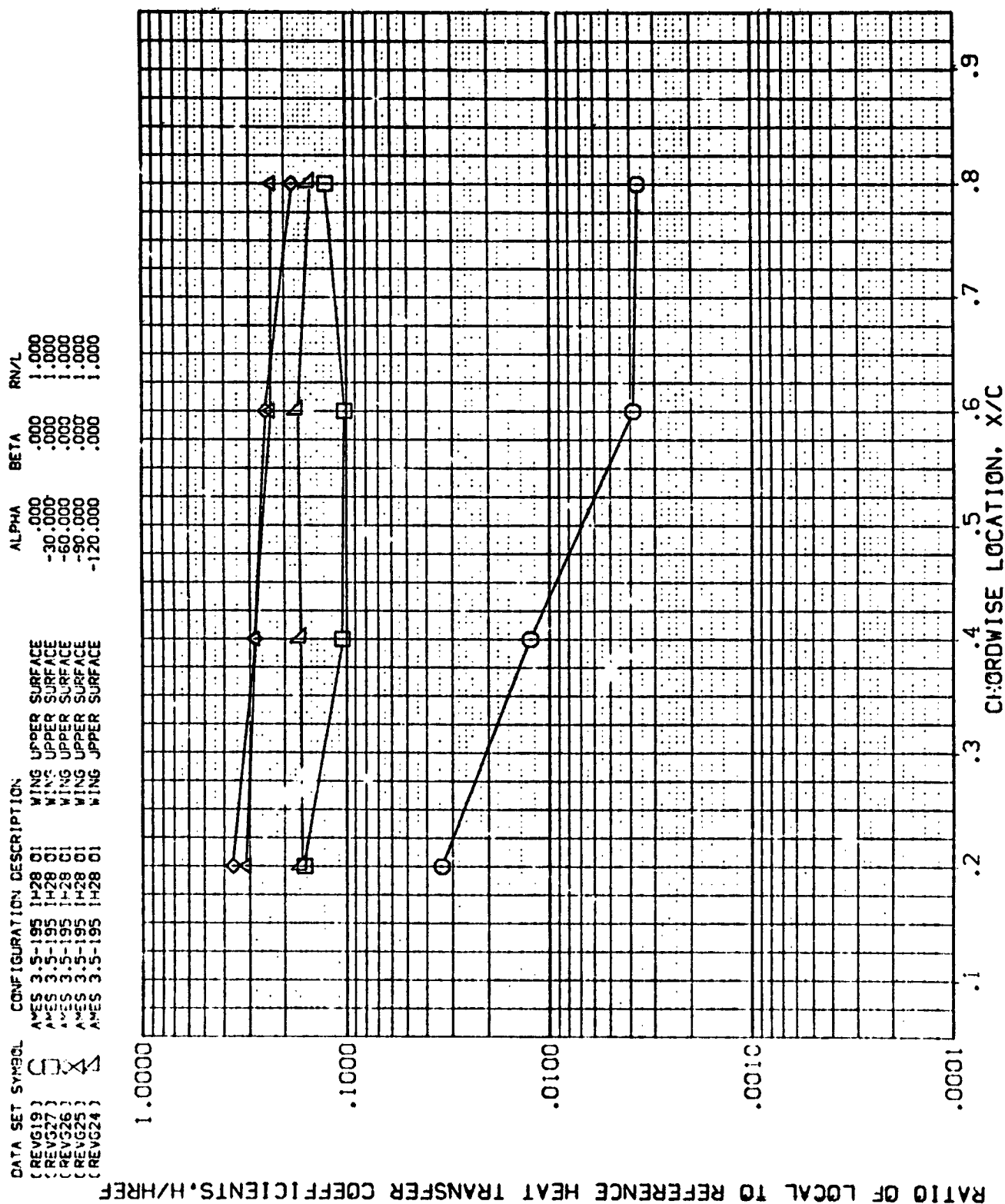


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 $h_{AW}/h_T = .900$ $2Y/B = .400$

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(REV619)	AMES 3.5-195 IH28 01	WING UPPER SURFACE
(REV627)	AMES 3.5-195 IH28 01	WING UPPER SURFACE
(REV626)	AMES 3.5-195 IH28 01	WING UPPER SURFACE
(REV625)	AMES 3.5-195 IH28 01	WING UPPER SURFACE
(REV624)	AMES 3.5-195 IH28 01	WING UPPER SURFACE

A' PHA BETA RN/L

.300	.000	1.000
-30.000	.000	1.000
-60.000	.000	1.000
-90.000	.000	1.000
-120.000	.000	1.000

RATIO OF LOCAL TO-REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

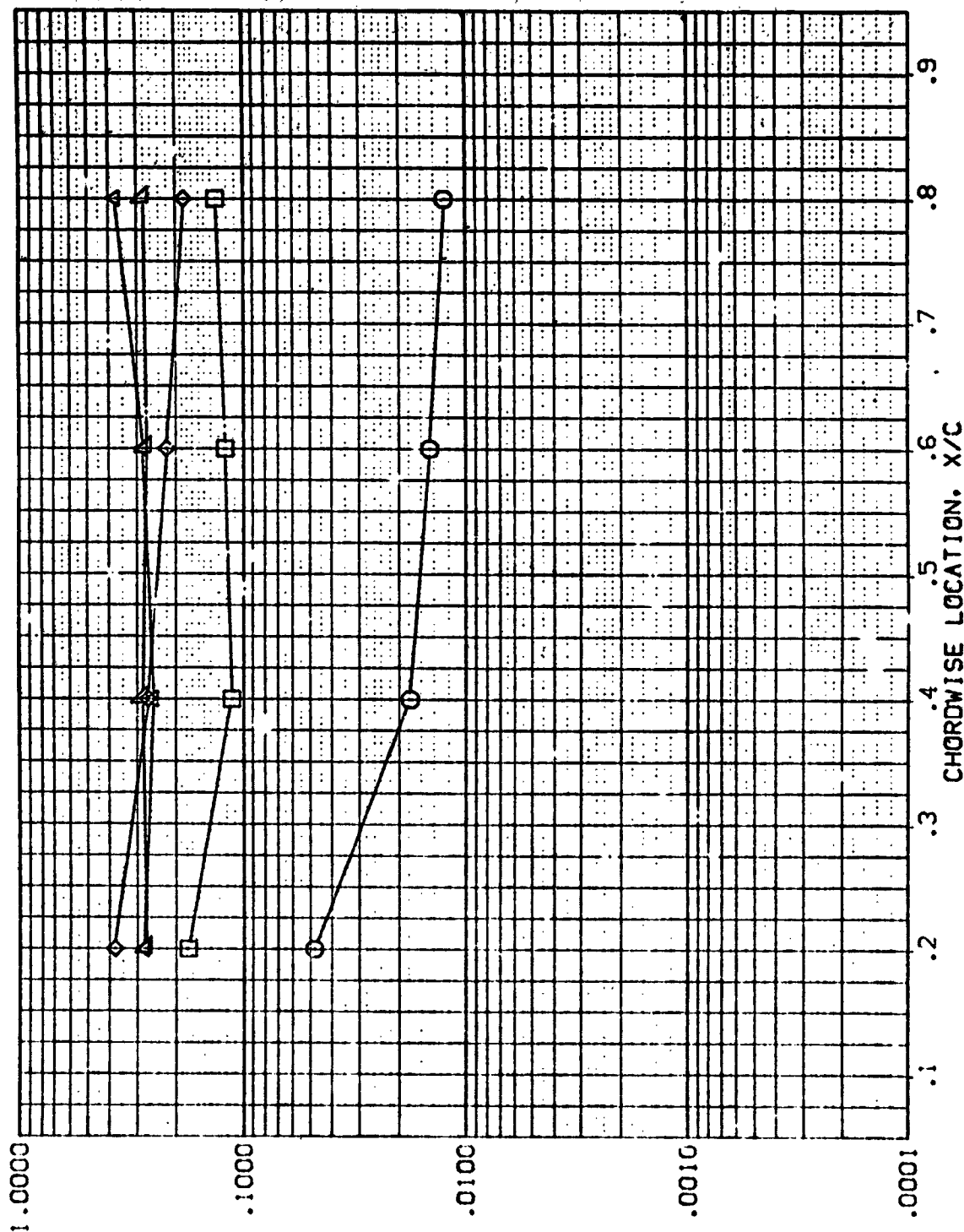


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 2Y/B = .600

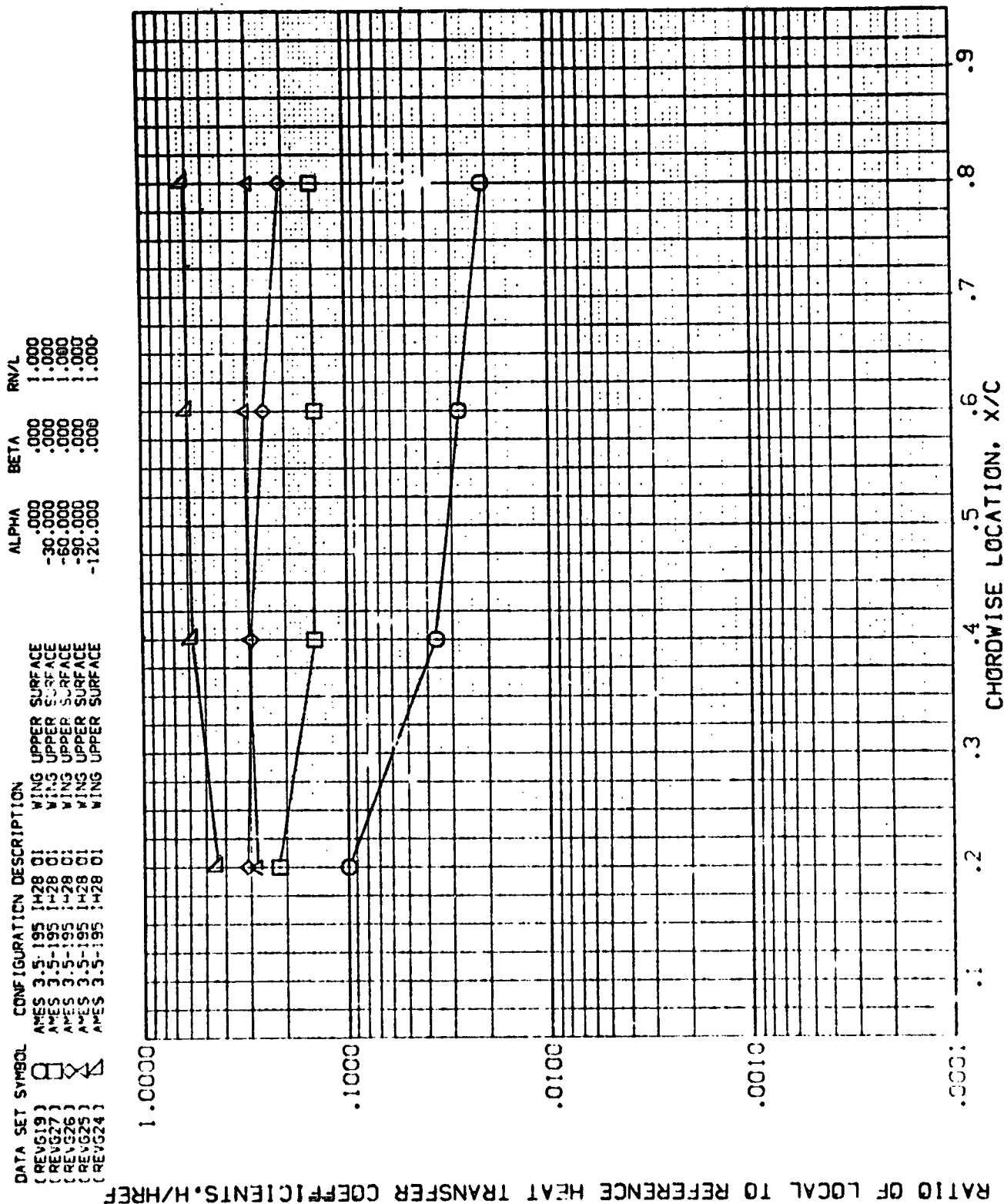


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

WASH = 5.300 -444-7 = .900 2V/B

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AL ^{3/4} A	BETA	RM/L
(REV019)	WING UPPER SURFACE	.000	.000	1.000
(REV020)	WING UPPER SURFACE	30.000	.000	1.000
(REV021)	WING UPPER SURFACE	60.000	.000	1.000
(REV022)	WING UPPER SURFACE	90.000	.000	1.000
(REV023)	WING UPPER SURFACE	120.000	.000	1.000

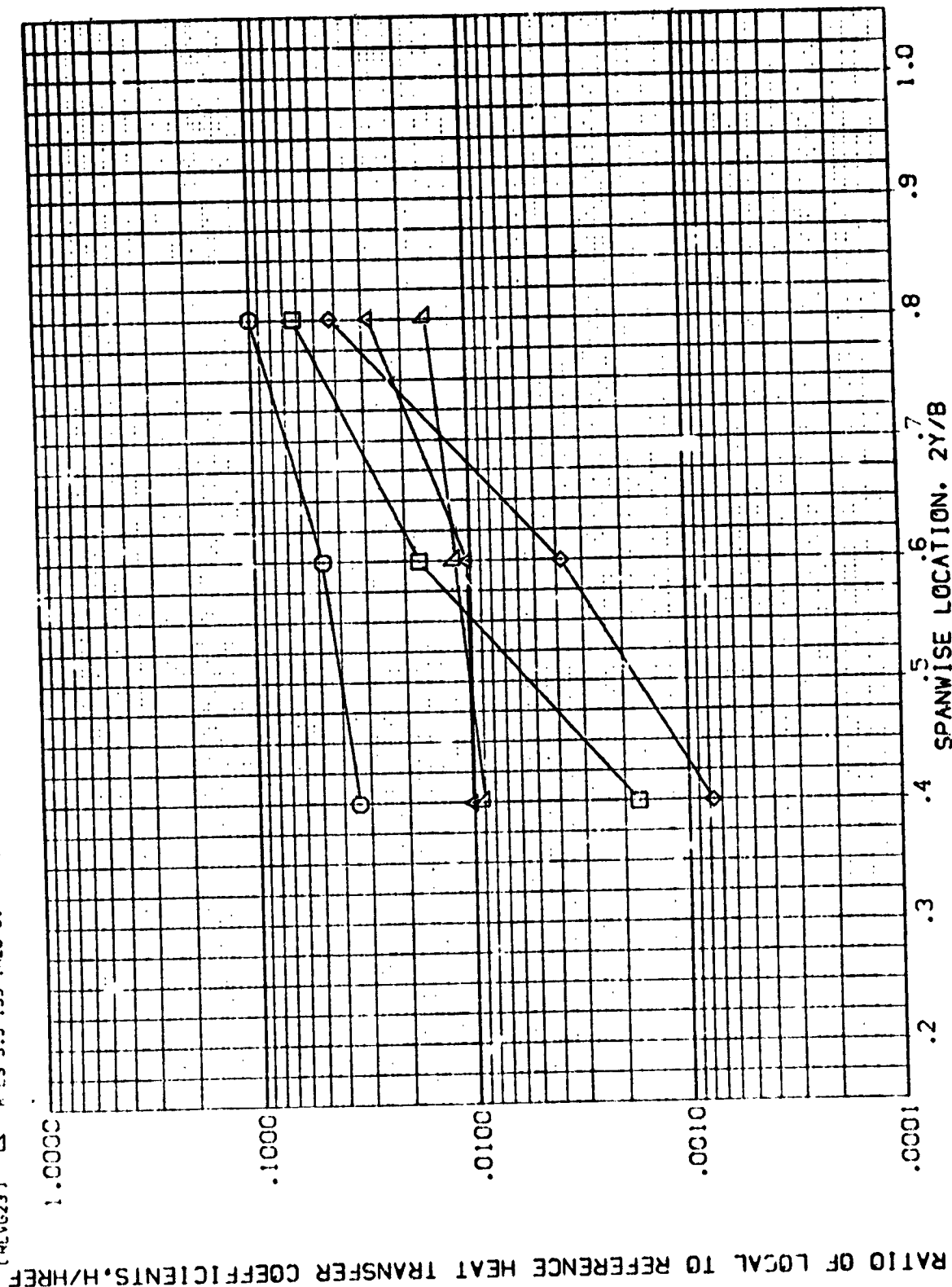


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 X/C = .200

DATA SET S-902-
 (REV 19)
 (REV 20)
 (REV 21)
 (REV 22)
 (REV 23)

CONFIGURATION DESCRIPTION
 AMES 3.5-195 1428 01 WING UPPER SURFACE
 AMES 3.5-195 1428 01 WING UPPER SURFACE
 AMES 3.5-195 1428 01 WING UPPER SURFACE
 AMES 3.5-195 1428 01 WING UPPER SURFACE
 AMES 3.5-195 1428 01 WING UPPER SURFACE

ALPHA .000
 30.000
 60.000
 90.000
 120.000

BETA .000
 .000
 .000
 .000
 .000

RM/L 1.000
 1.000
 1.000
 1.000
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

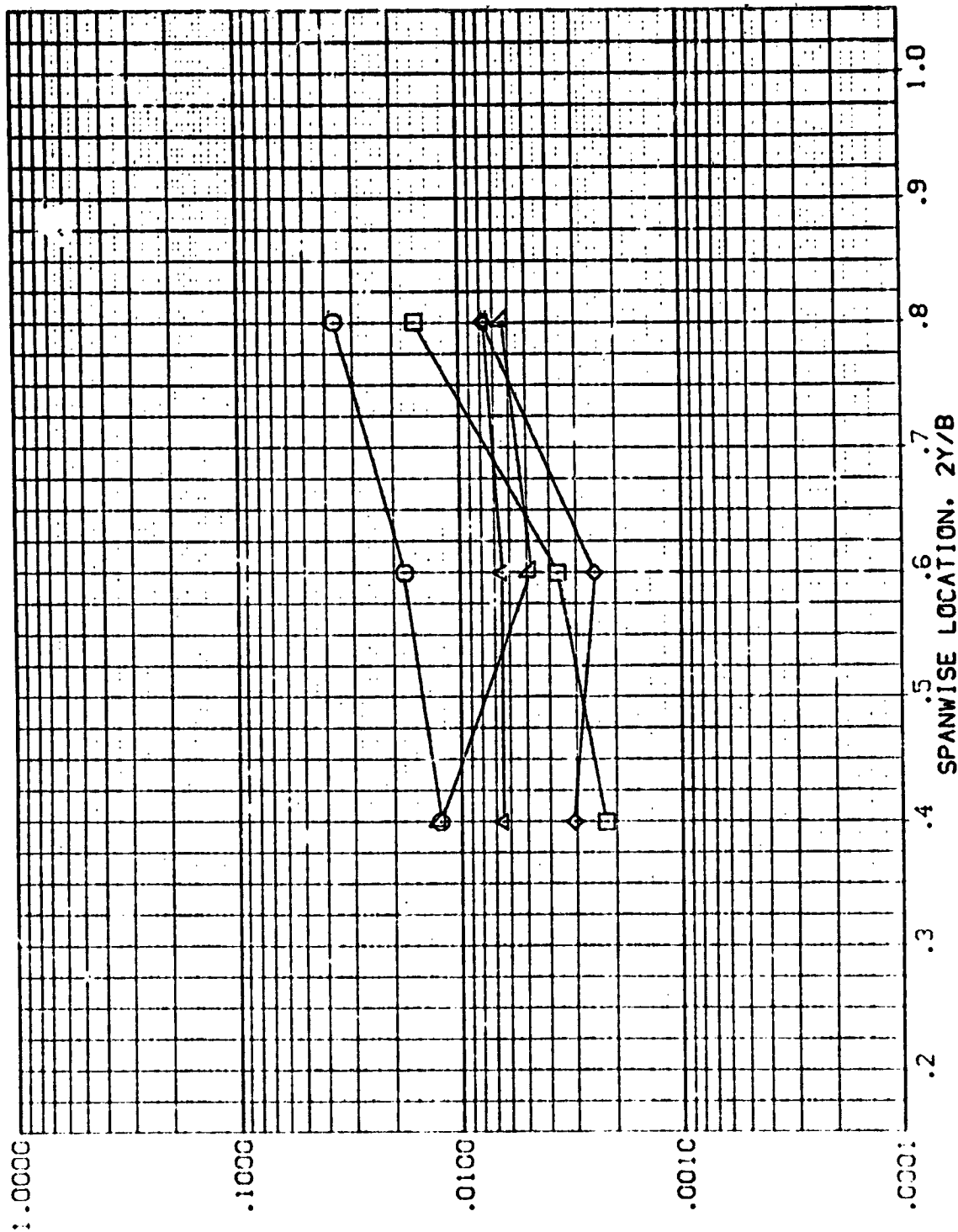


FIG 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 H/W/HREF = .900 X/C = .400

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RV/L
AMES 3.5-195 1429 01	WING UPPER SURFACE	.000	.000	1.000
AMES 3.5-195 1428 01	WING UPPER SURFACE	30.000	.000	1.000
AMES 3.5-195 1428 01	WING UPPER SURFACE	60.000	.000	1.000
AMES 3.5-195 1428 01	WING UPPER SURFACE	90.000	.000	1.000
AMES 3.5-195 1428 01	WING UPPER SURFACE	120.000	.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

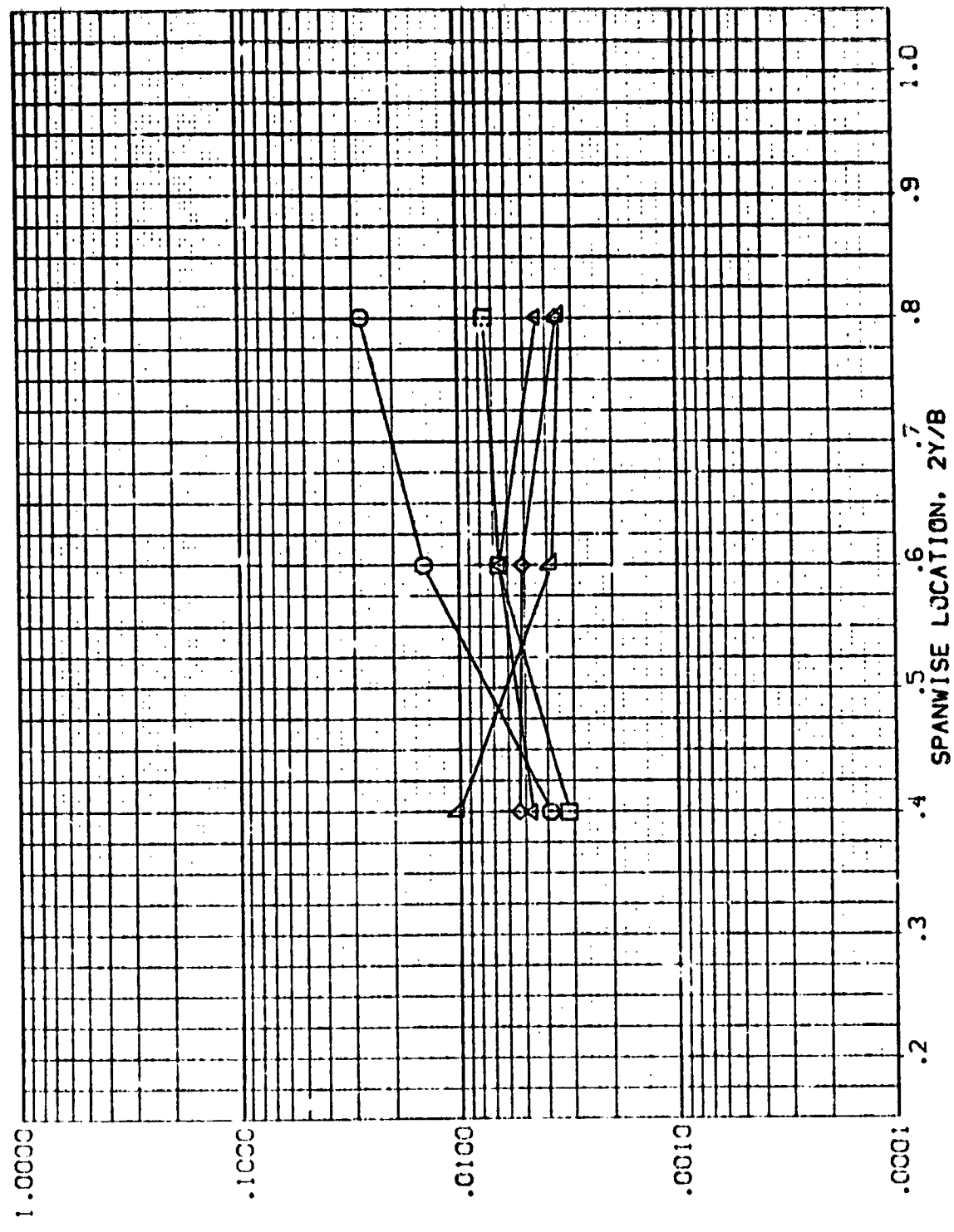


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 -AW/HT= .900 X/C = .500

DATA SET SYST. CONFIGURATION DESCRIPTION ALPHA BETA PN/L

(REV319)	AVES 3-5-195 1428 C1	WING UPPER SURFACE	.000	.000	1.000
(REV320)	AVES 3-5-195 1428 C1	WING UPPER SURFACE	30.000	.000	1.000
(REV321)	AVES 3-5-195 1428 C1	WING UPPER SURFACE	60.000	.000	1.000
(REV322)	AVES 3-5-195 1428 C1	WING UPPER SURFACE	90.000	.000	1.000
(REV323)	AVES 3-5-195 1428 C1	WING UPPER SURFACE	120.000	.000	1.000

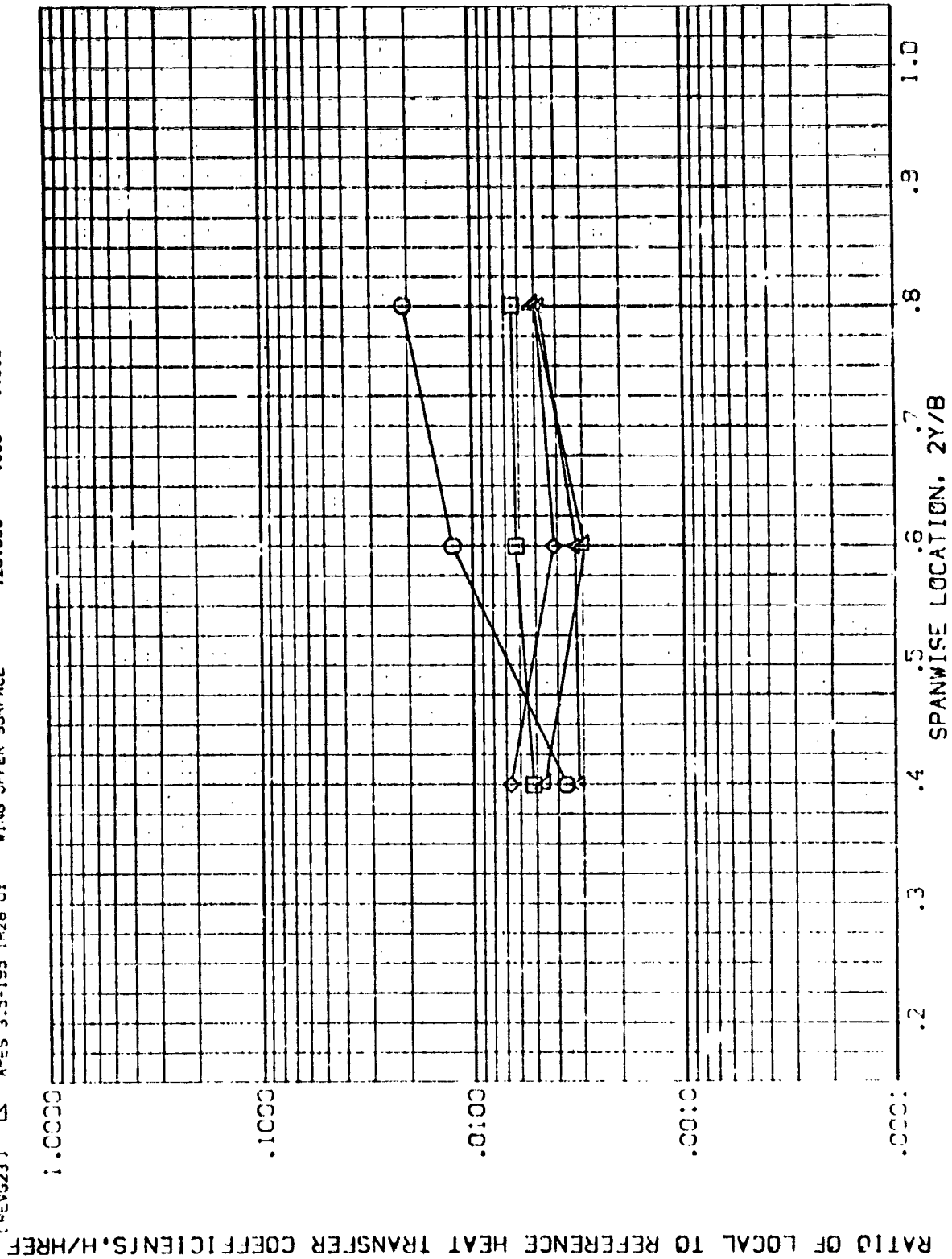


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.000 HAW HT = .900 X/C = .800

DATA SET SYMBOL
(REV19)
(REV27)
(REV26)
(REV25)
(REV24)

CONFIGURATION DESCRIPTION
AMES 3.5-195 1428 01 WING UPPER SURFACE
AMES 3.5-195 1428 01 WING UPPER SURFACE
AMES 3.5-195 1428 01 WING UPPER SURFACE
AMES 3.5-195 1428 01 WING UPPER SURFACE
AMES 3.5-195 1428 01 WING UPPER SURFACE

ALPHA
.000
-30.000
-60.000
-90.000
-120.000

BETA
.000
.000
.000
.000
.000

RN/L
1.000
1.000
1.000
1.000
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

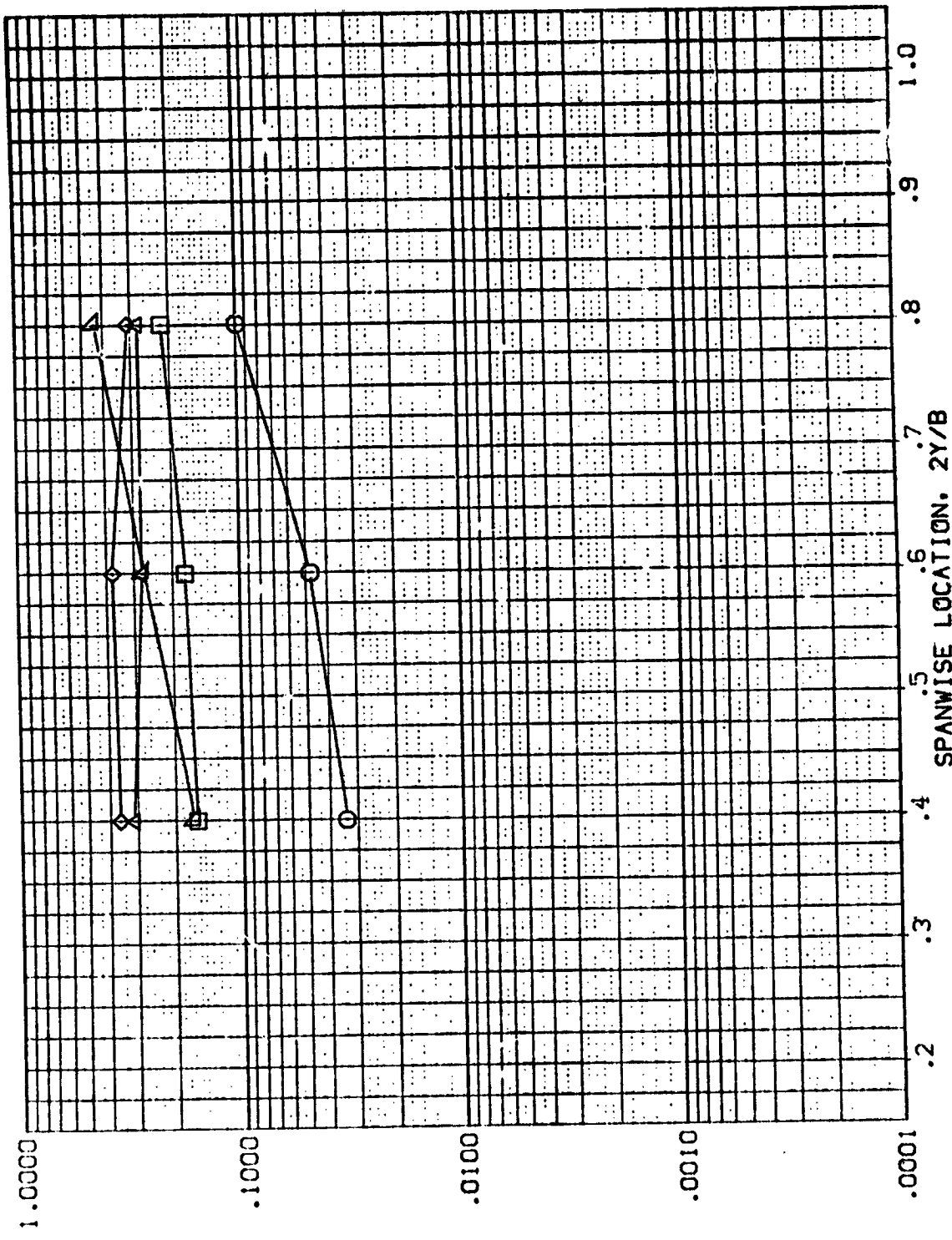


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 X/C = .200

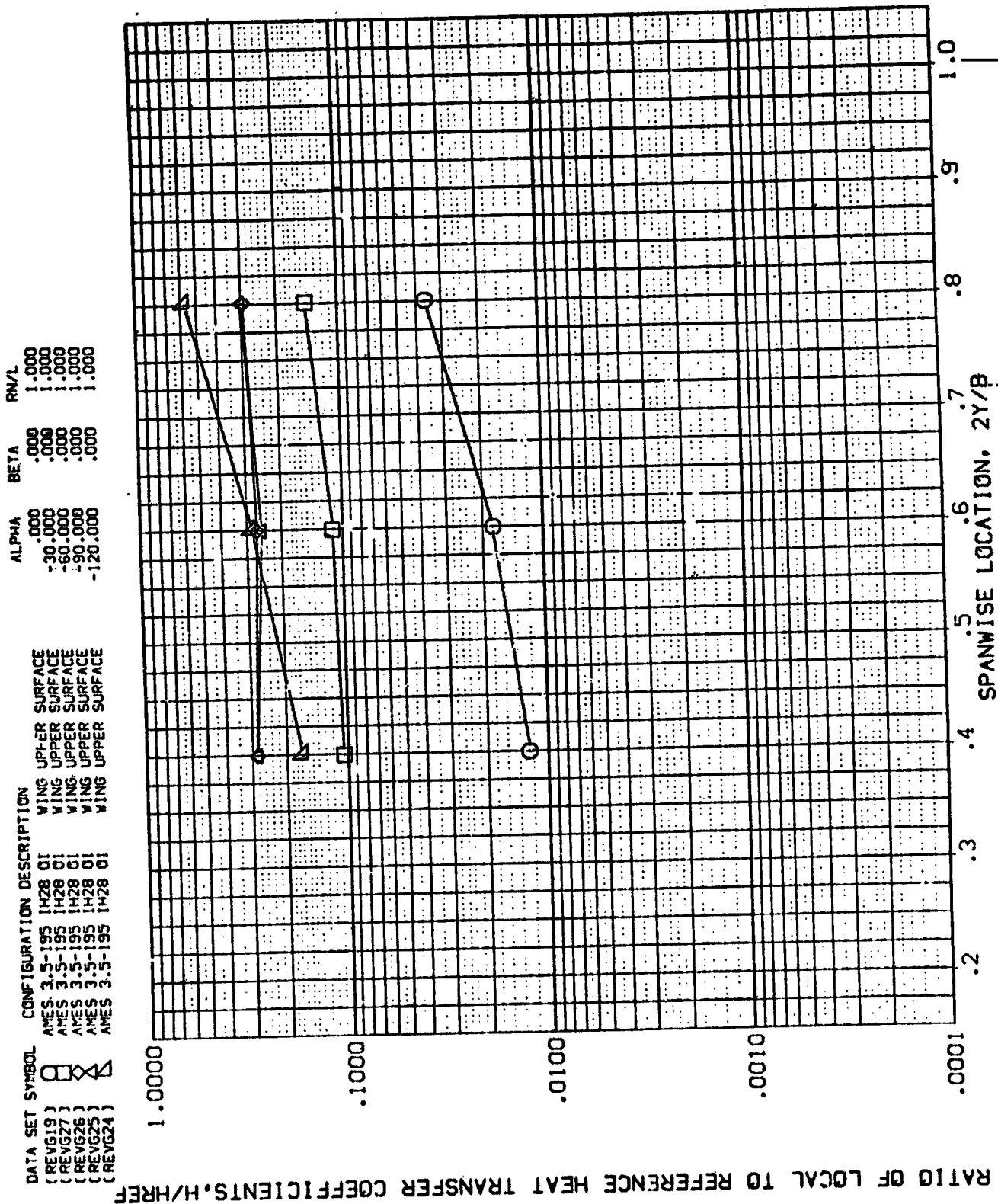


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AL ³ /HA	BETA	RN/L
(REV019)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	.000	.000	1.000
(REV027)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	-30.000	.000	1.000
(REV026)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	-60.000	.000	1.000
(REV025)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	-90.000	.000	1.000
(REV024)	AMES 3.5-195 IH28 01 WING UPPER SURFACE	-120.000	.000	1.000

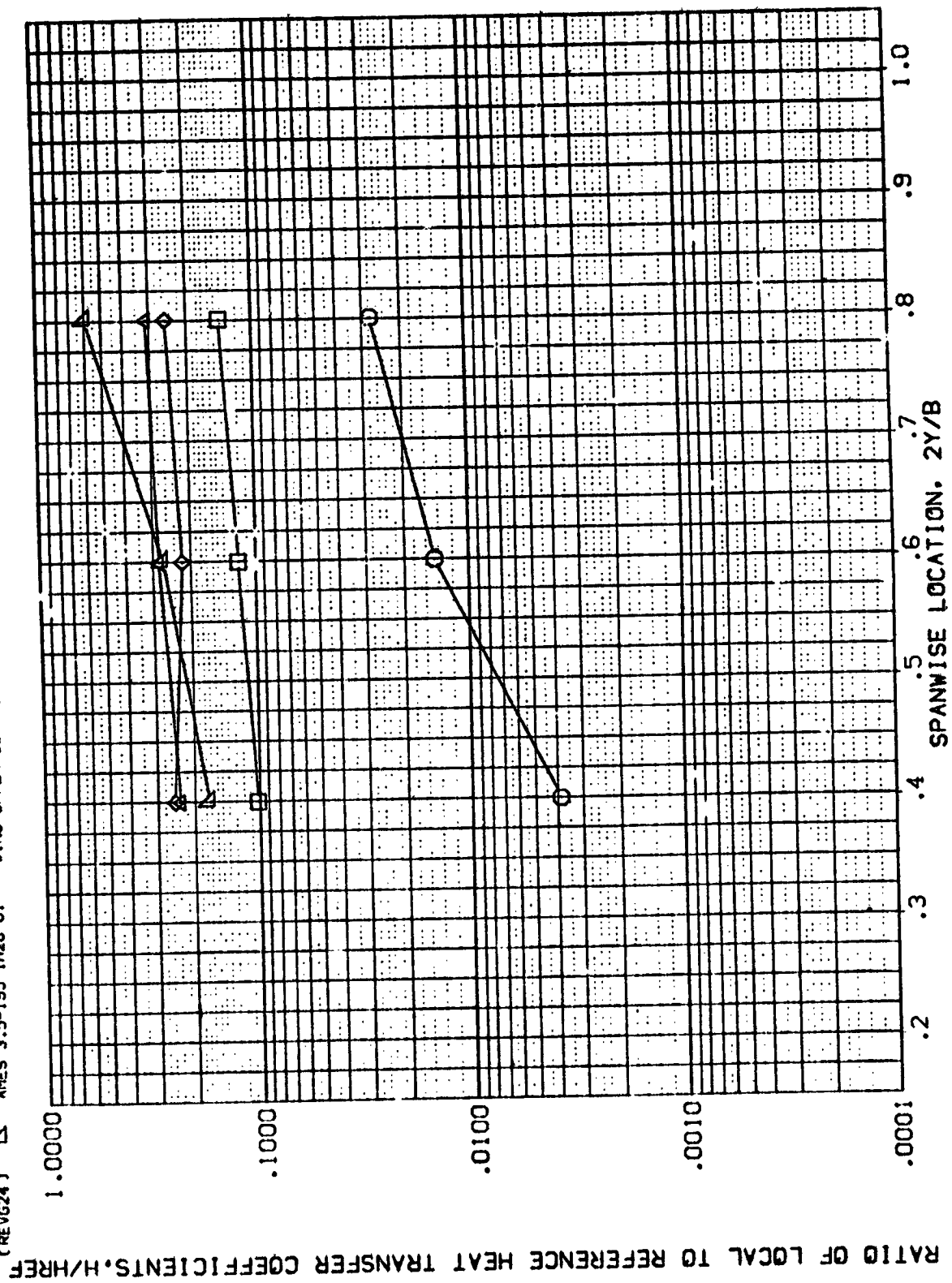


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 X/C = .600

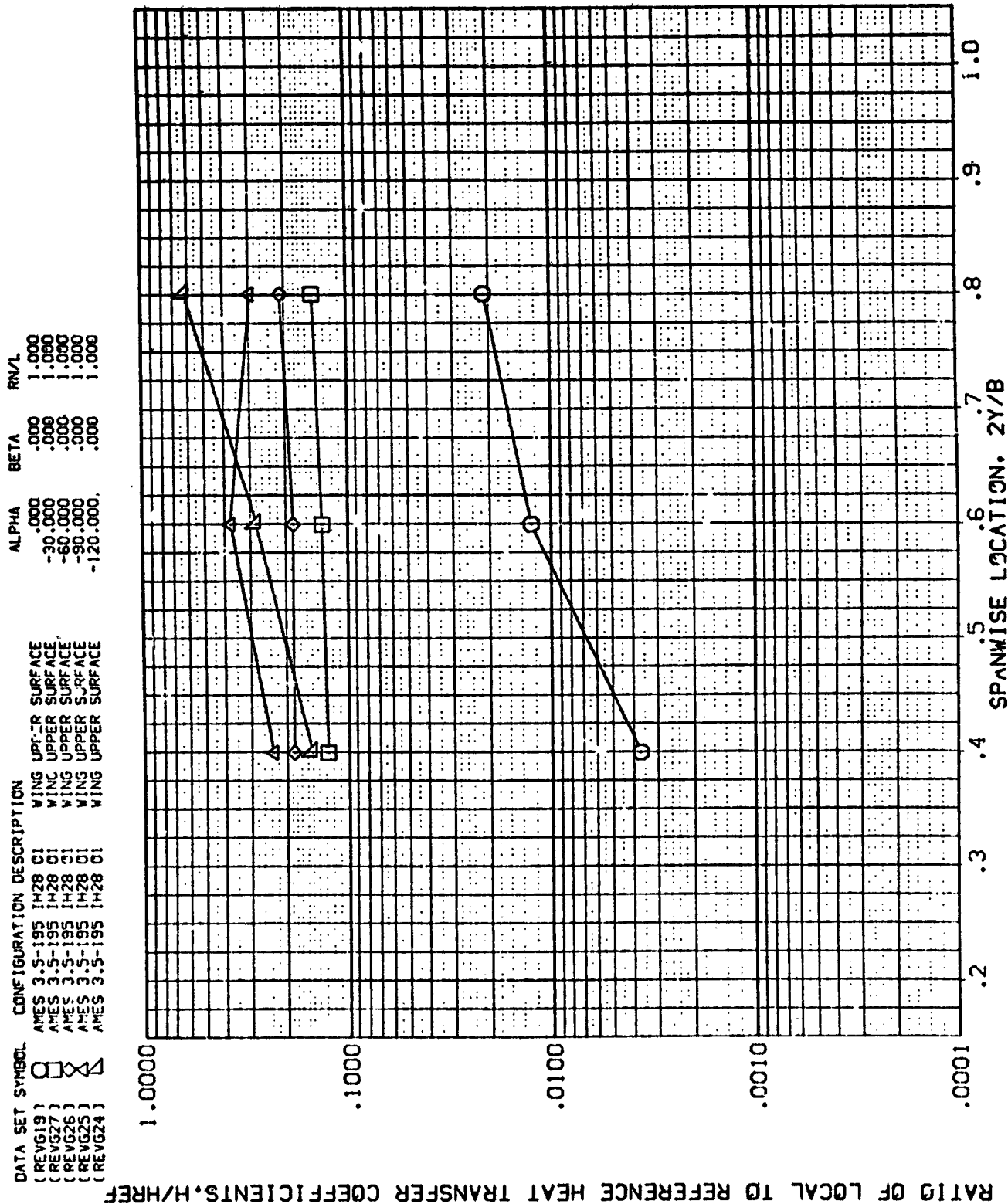


FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 X/C = .800

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.400	5.228	.000	.000
□	.900			1.000	
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

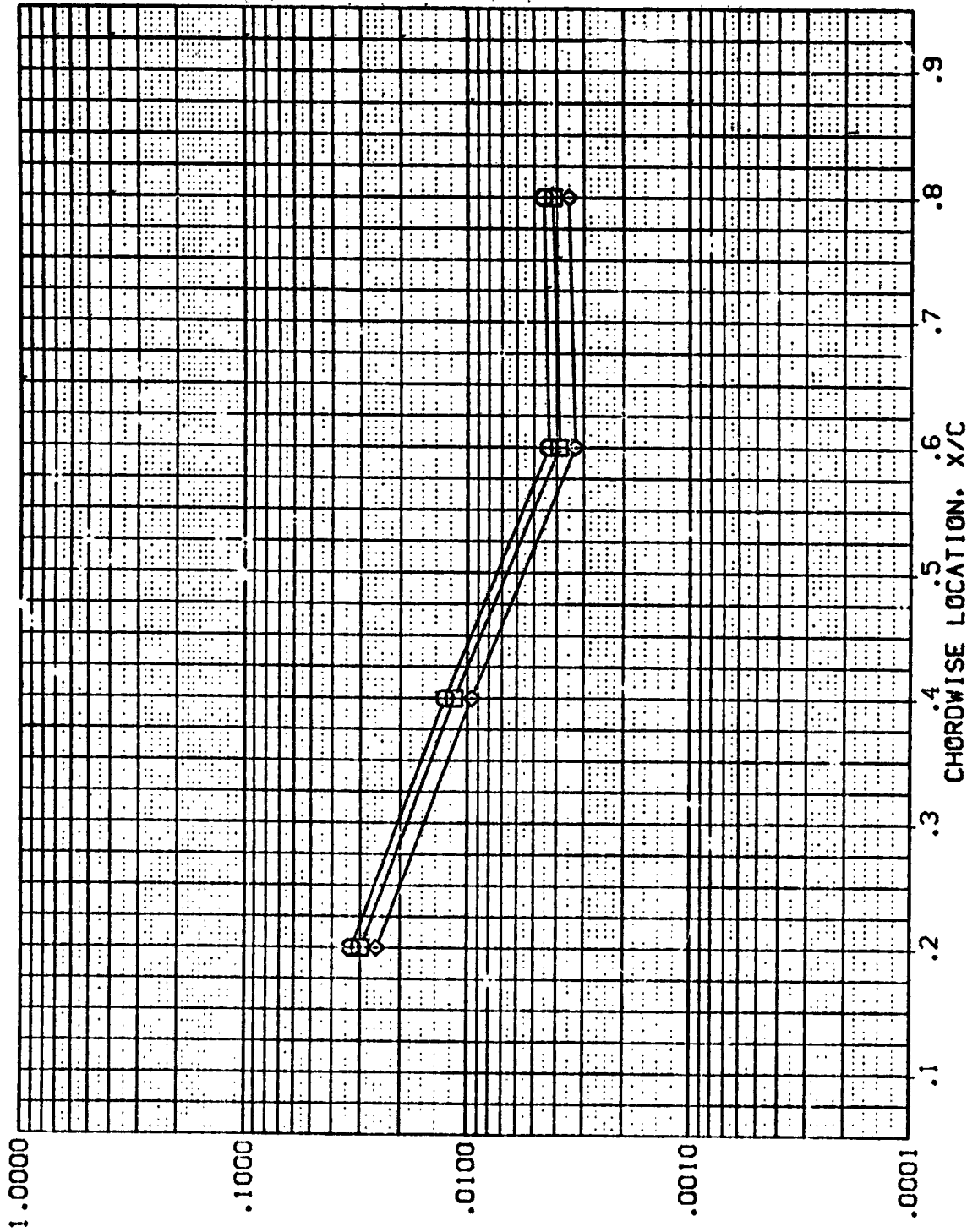


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV G01)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

SYMBOL	MAY/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.600	5.228	.000	.000
□	.900			1.000	
◇	1.000				

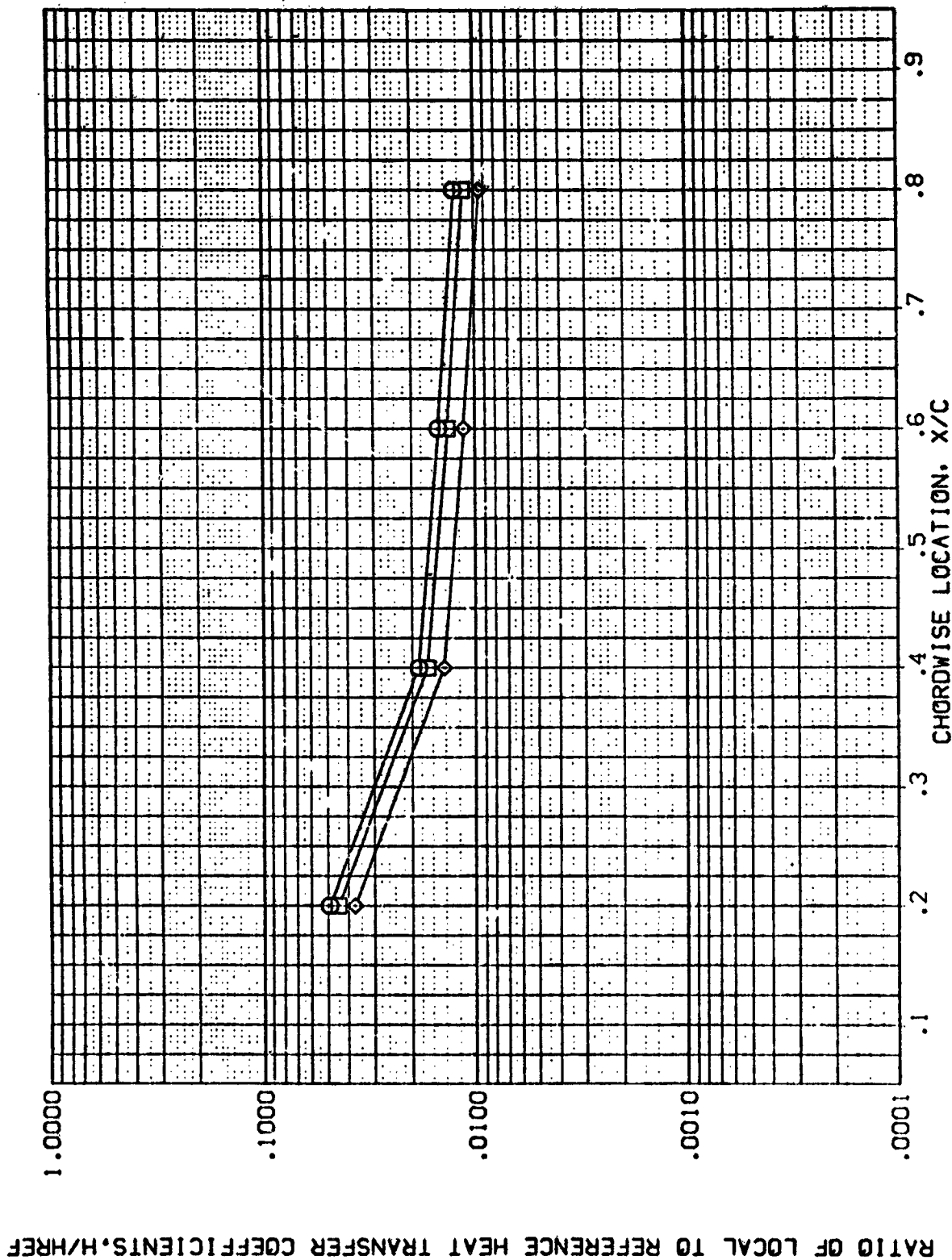


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV601)

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE

PARAMETER VALUES
ALPHA .000 BETA .000
RN/L .000

SYMBOL HAW/HT 2Y/B MACH
◇ .850 .800 5.228
□ .900
◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

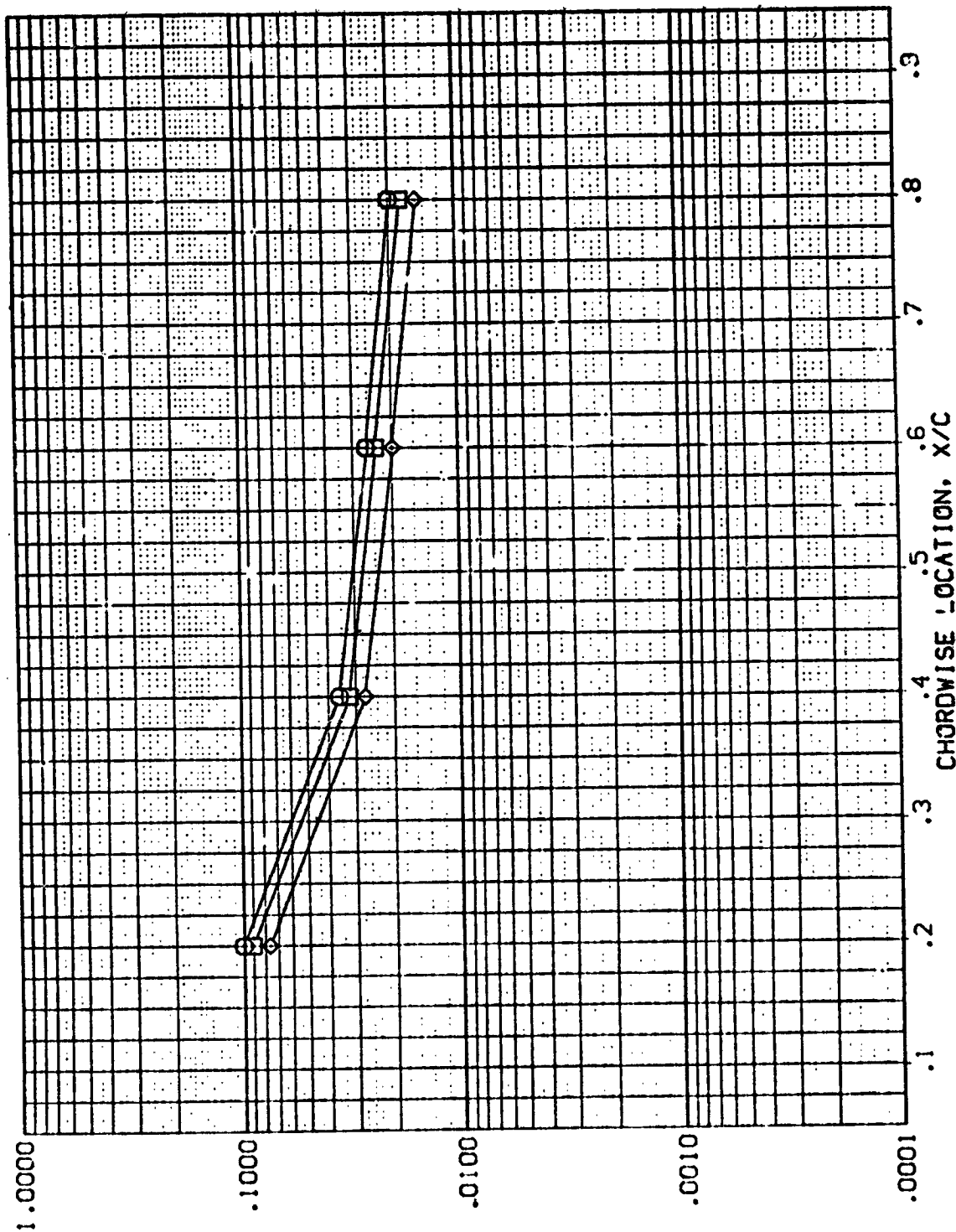


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE (REV002)

SYMBOL	MAV/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.400	5.219	ALPHA
□	.900			RN/L
◇	1.000			BETA
				.000

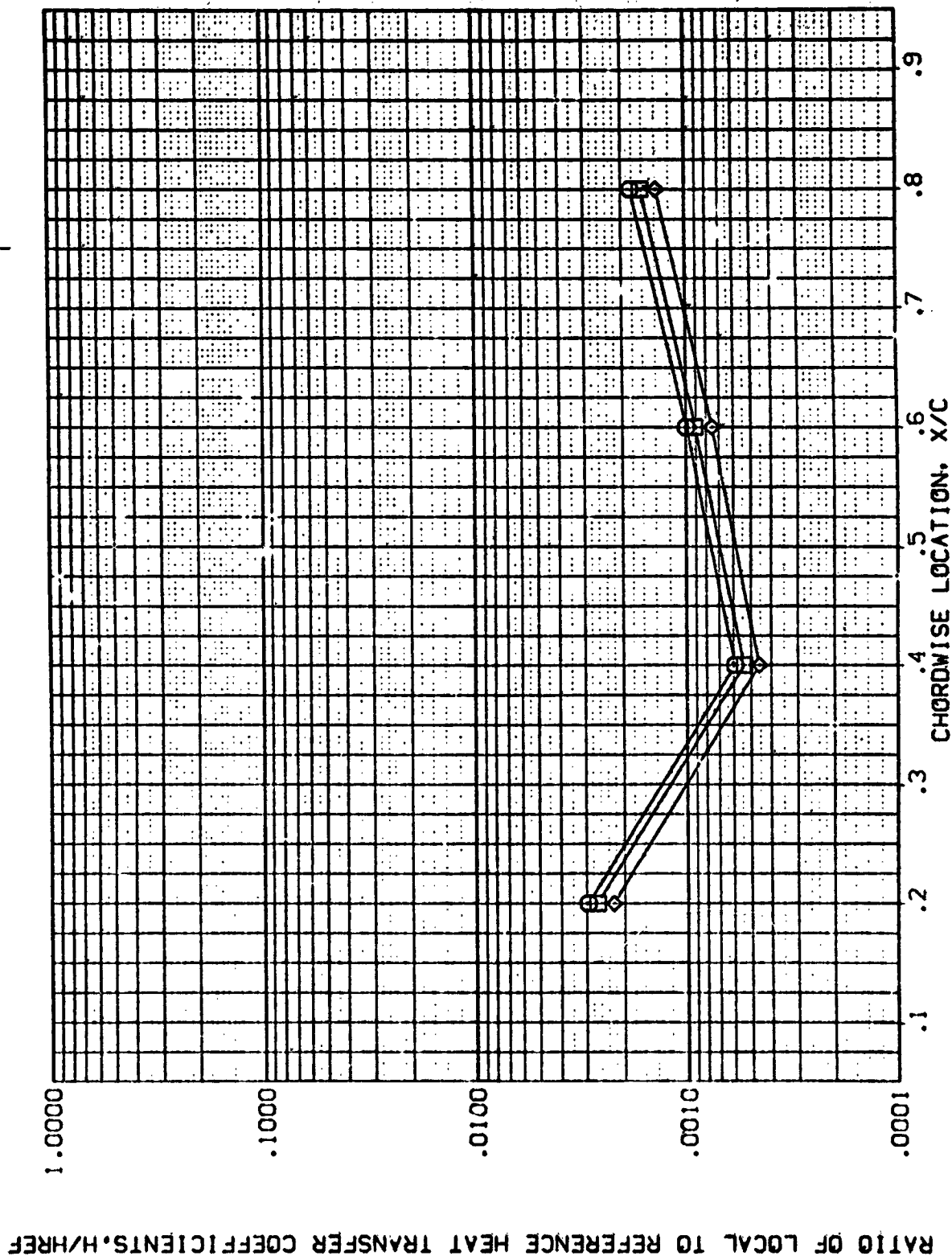


FIG. 23 RIGHT WING UPPER SURFACE; ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G02)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.600	5.219	30.000	.000
□	.900			1.000	
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

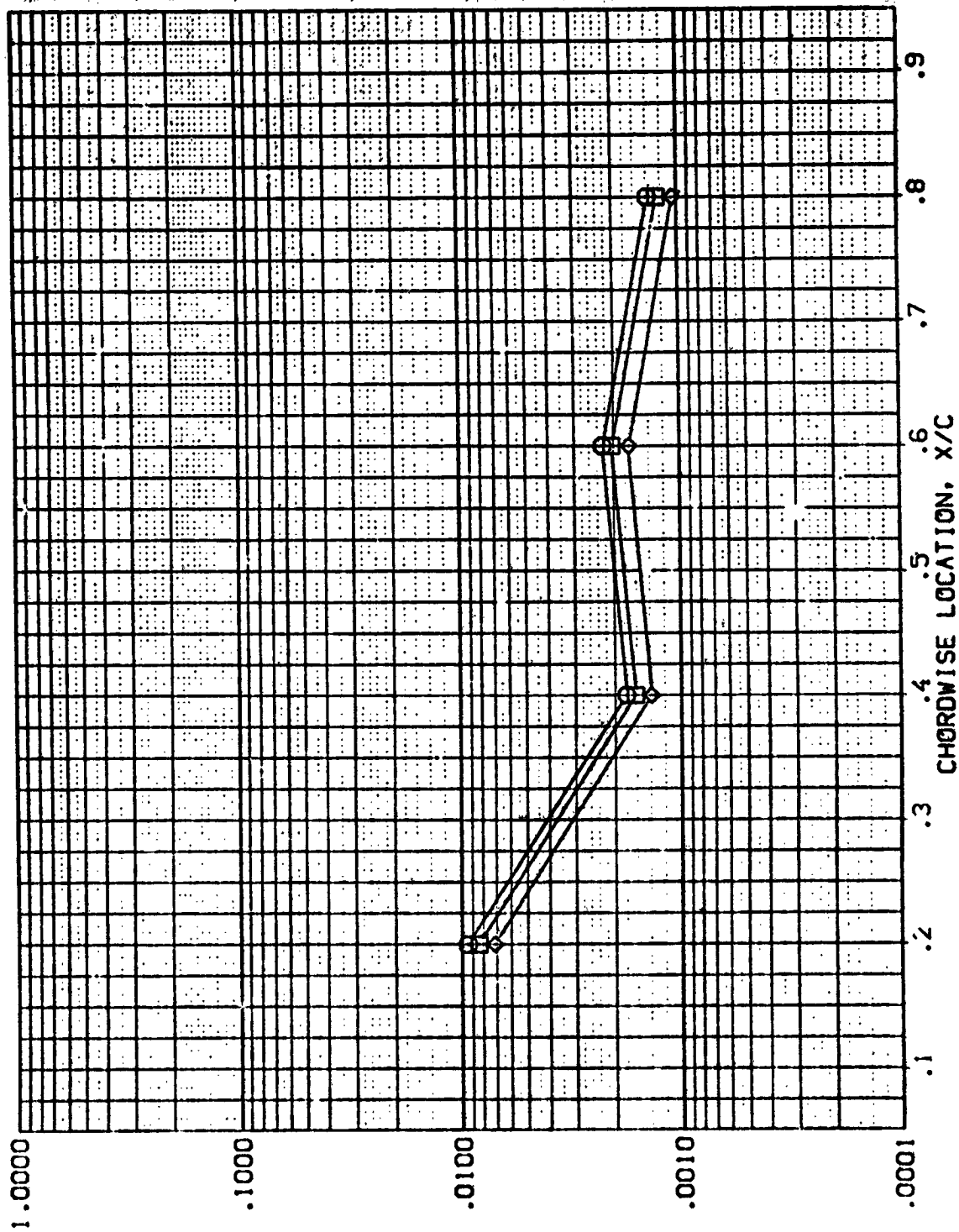


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV602)

SYMBOL
 ◇
 □
 ○

MAN/HT .850
 .900
 1.000
 2Y/B .800
 MACH 5.219

PARAMETRIC VALUES
 ALPHA .000
 RN/L 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

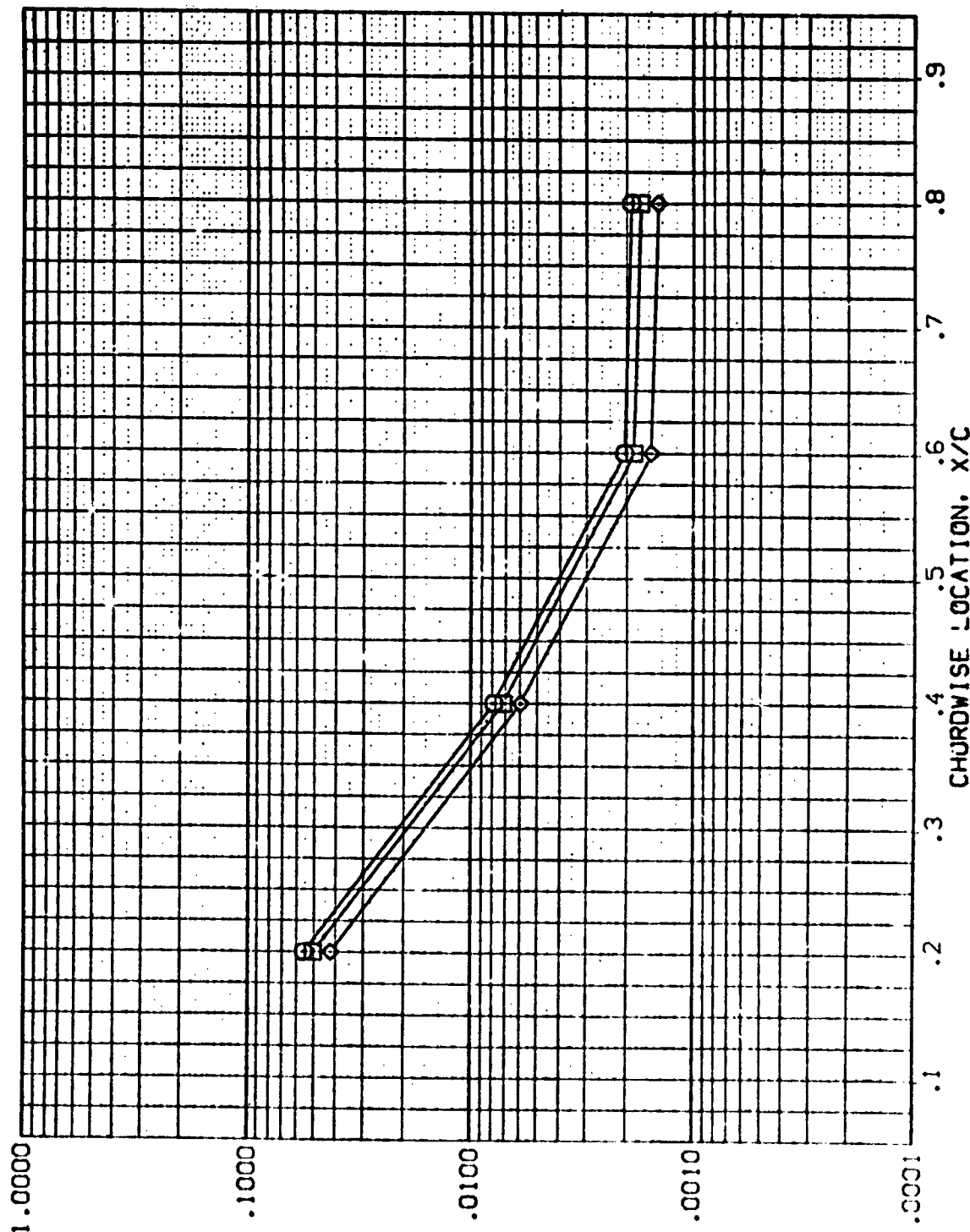


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV603)

PARAMETRIC VALUES
 60.000 BETA
 1.000

SYMBOL HAW/LT ZY/B MACH
 .850 .400 5.220
 .900
 1.000

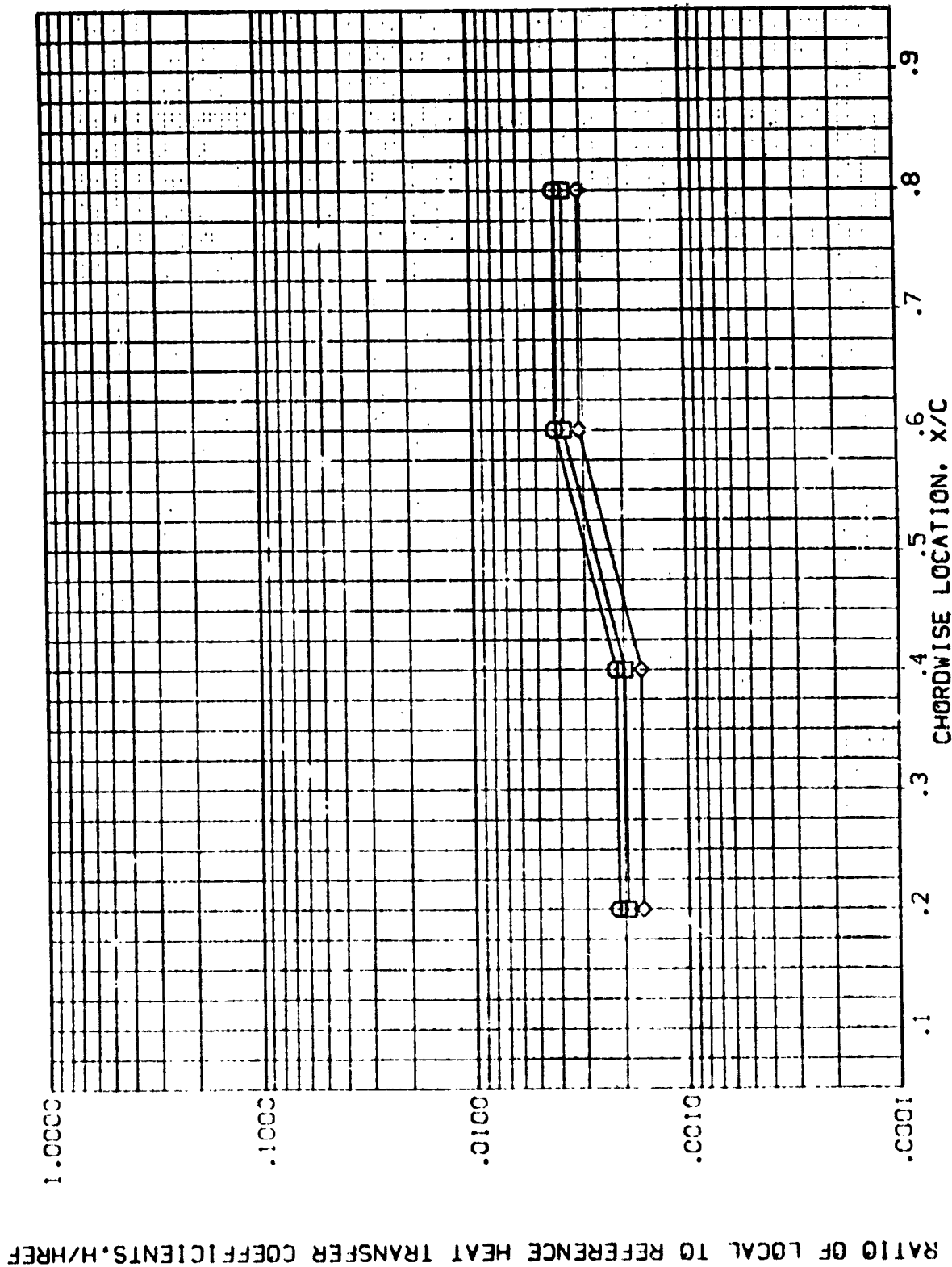


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING UPPER SURFACE (REV003)

SYMBOL	HA/WT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.500	5.220	ALPHA
□	.900			60.000
◇	1.000			BETA
				1.000
				.000

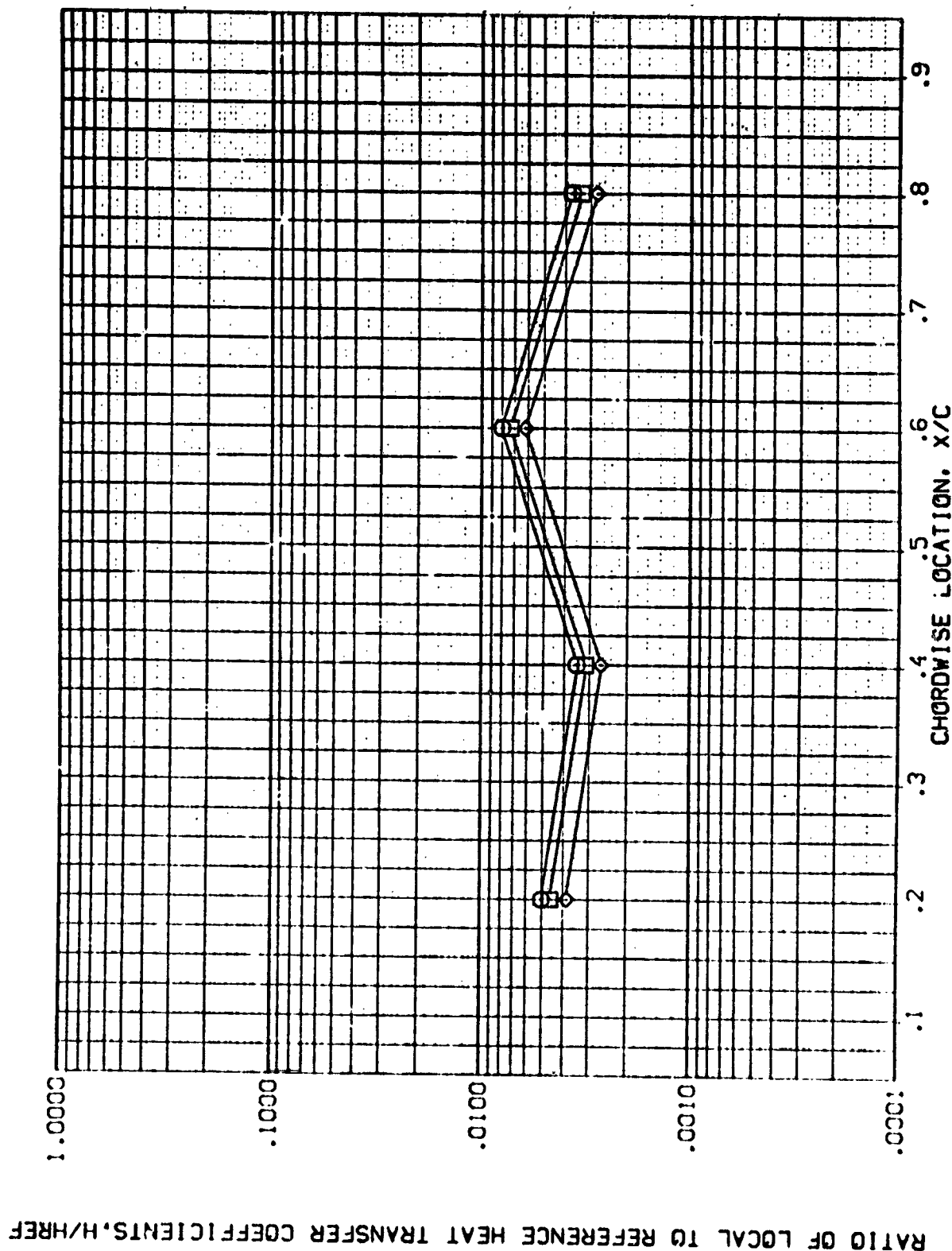


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G03)

SYMBOL
 □
 ◇

MAN/HT 2Y/B MACH
 .850 .800 5.220
 .900 1.000

PARAMETRIC VALUES
 ALPHA 60.000 BETA .000
 RH/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

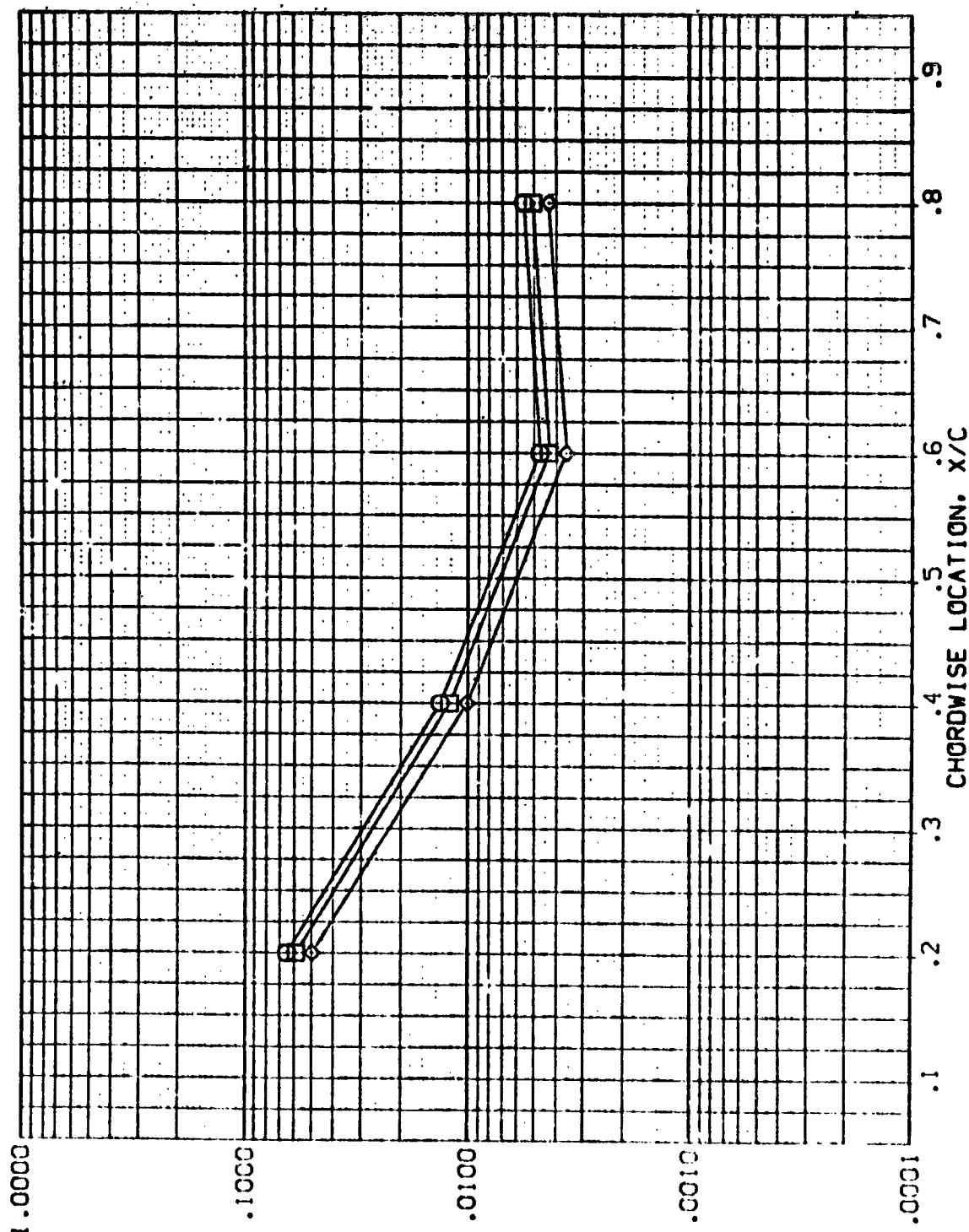


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVGC4)

SYMBOL	MAW/HT	2Y/B	MACH	PARAMETRIC VALUES
○	.850	.400	5.219	ALPHA 90.000
□	.900			BN/L 1.000
◇	1.000			BETA .000

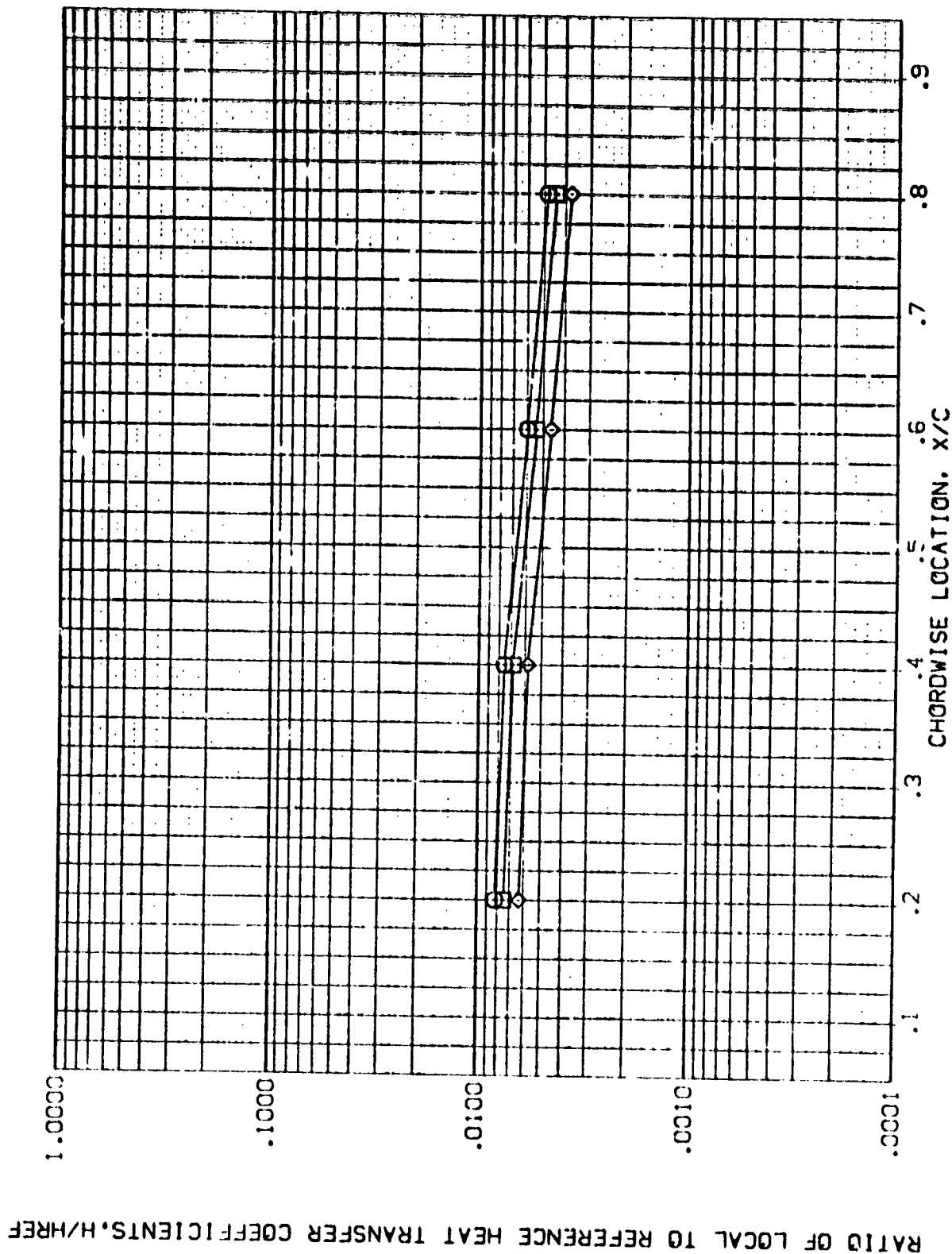


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES
◇	.850	.600	5.219	ALPHA 90.000 BETA .000
□	.900			RN/L .000
◇	1.000			

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

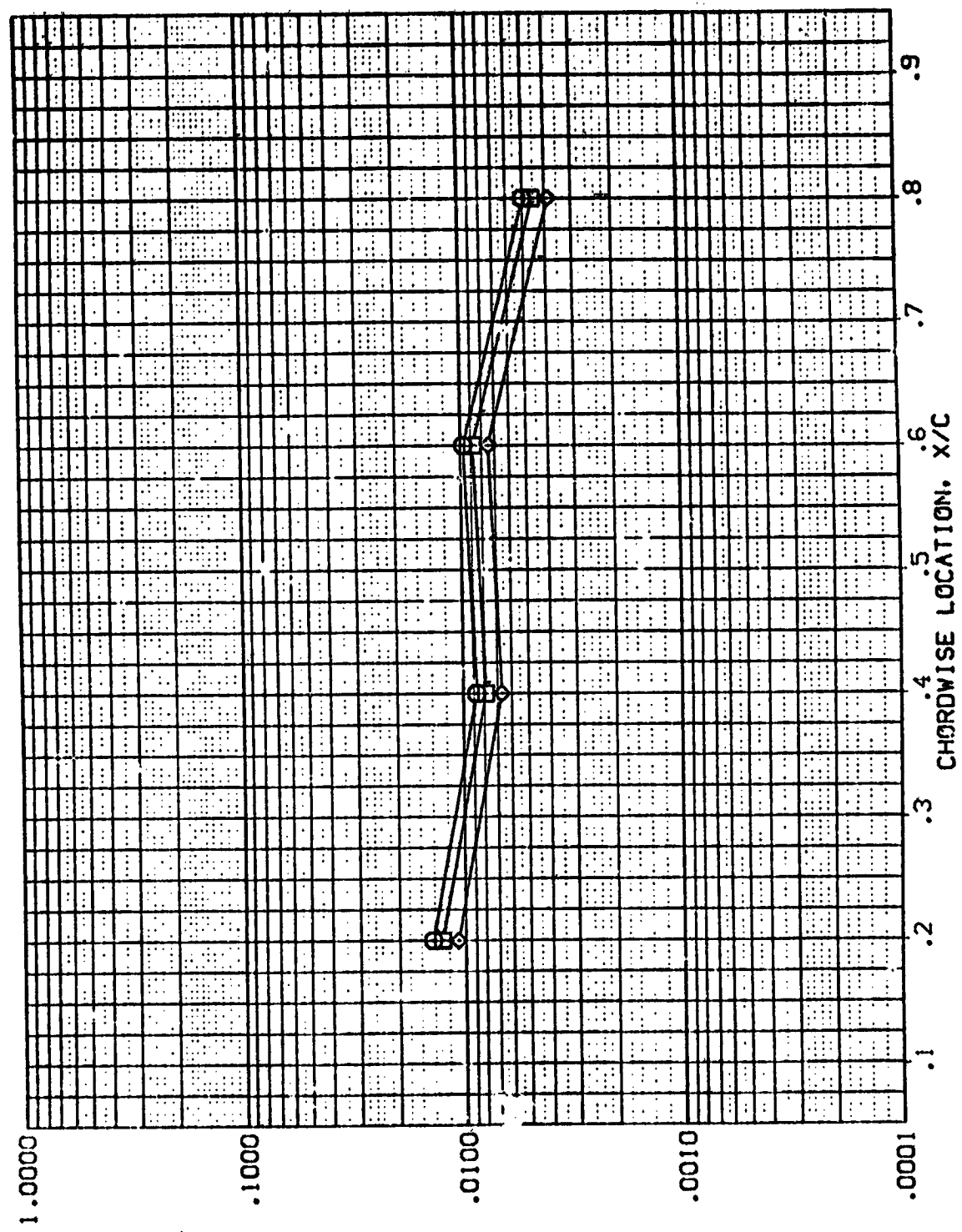


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV004)

SYMBOL	MAN/HT	2Y/B	MACH	PARAMETRIC VALUES
○	.850	.800	5.219	ALPHA
□	.900			RN/L
◇	1.000			BETA
				1.000
				.000

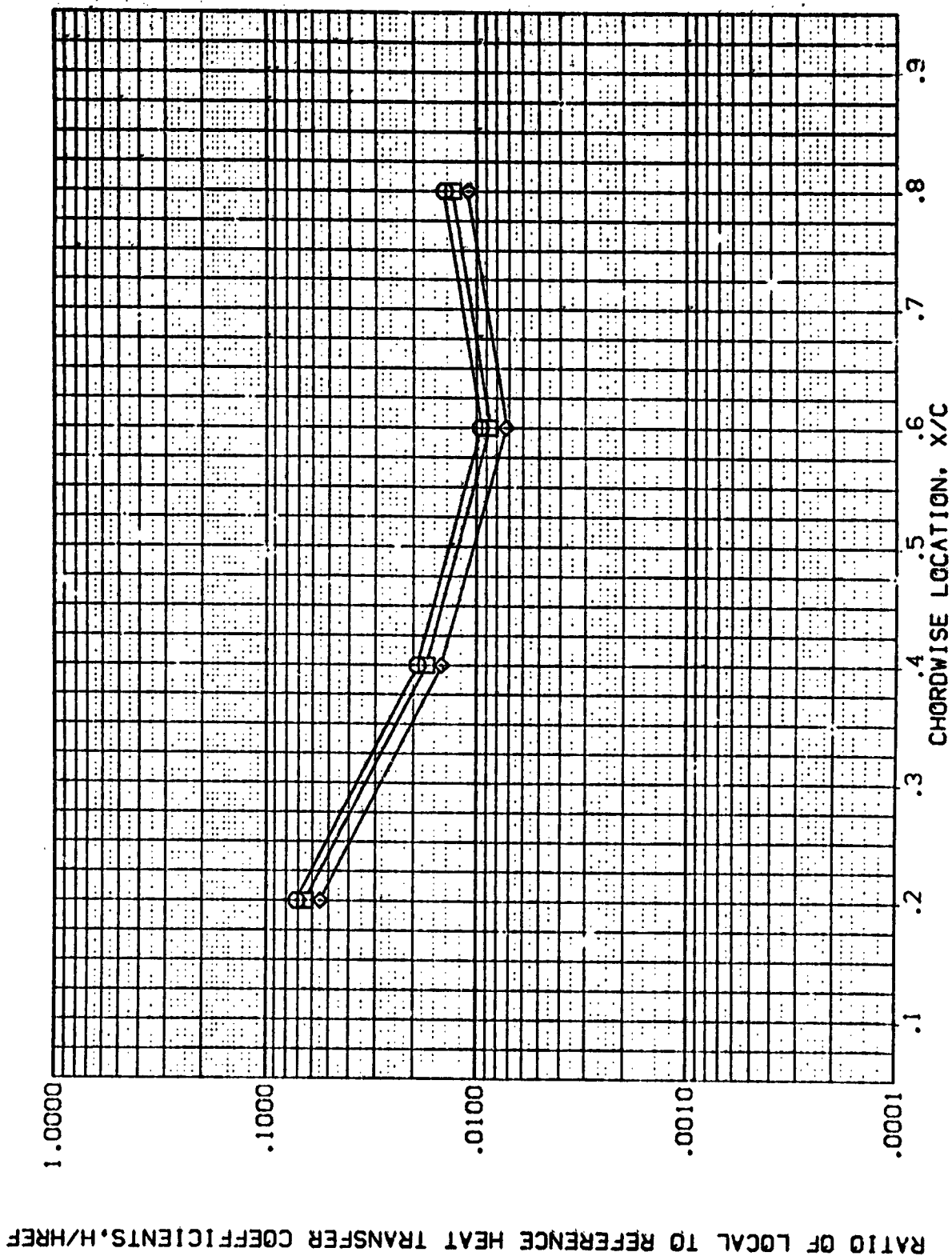


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G05)

SYMBOL
 ◇
 □
 ○

HAW/HT 2Y/B MACH
 .850 .400 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

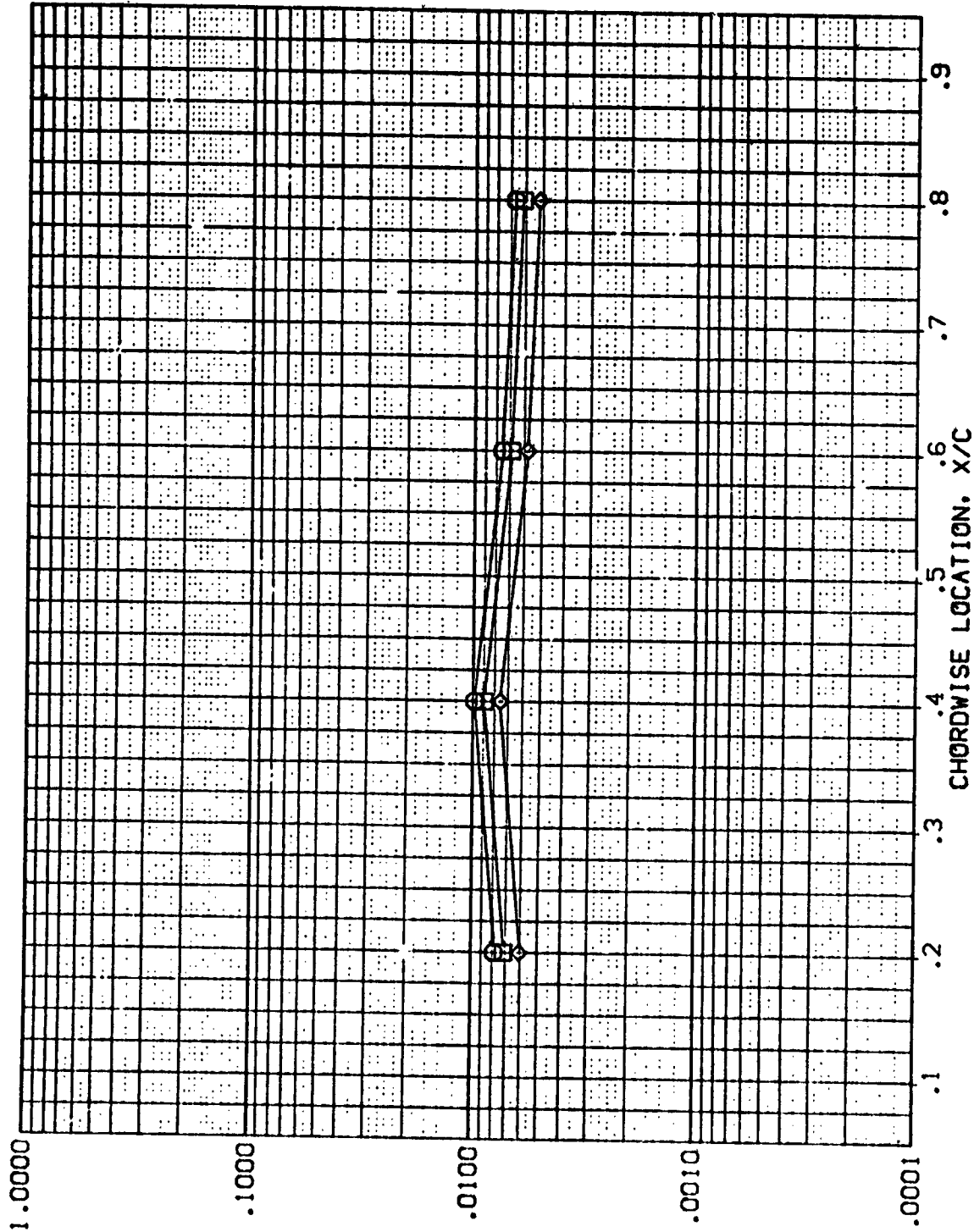


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G05)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
○	.850	.600	5.220	120.000	1.000
□	.900				
◇	1.000				

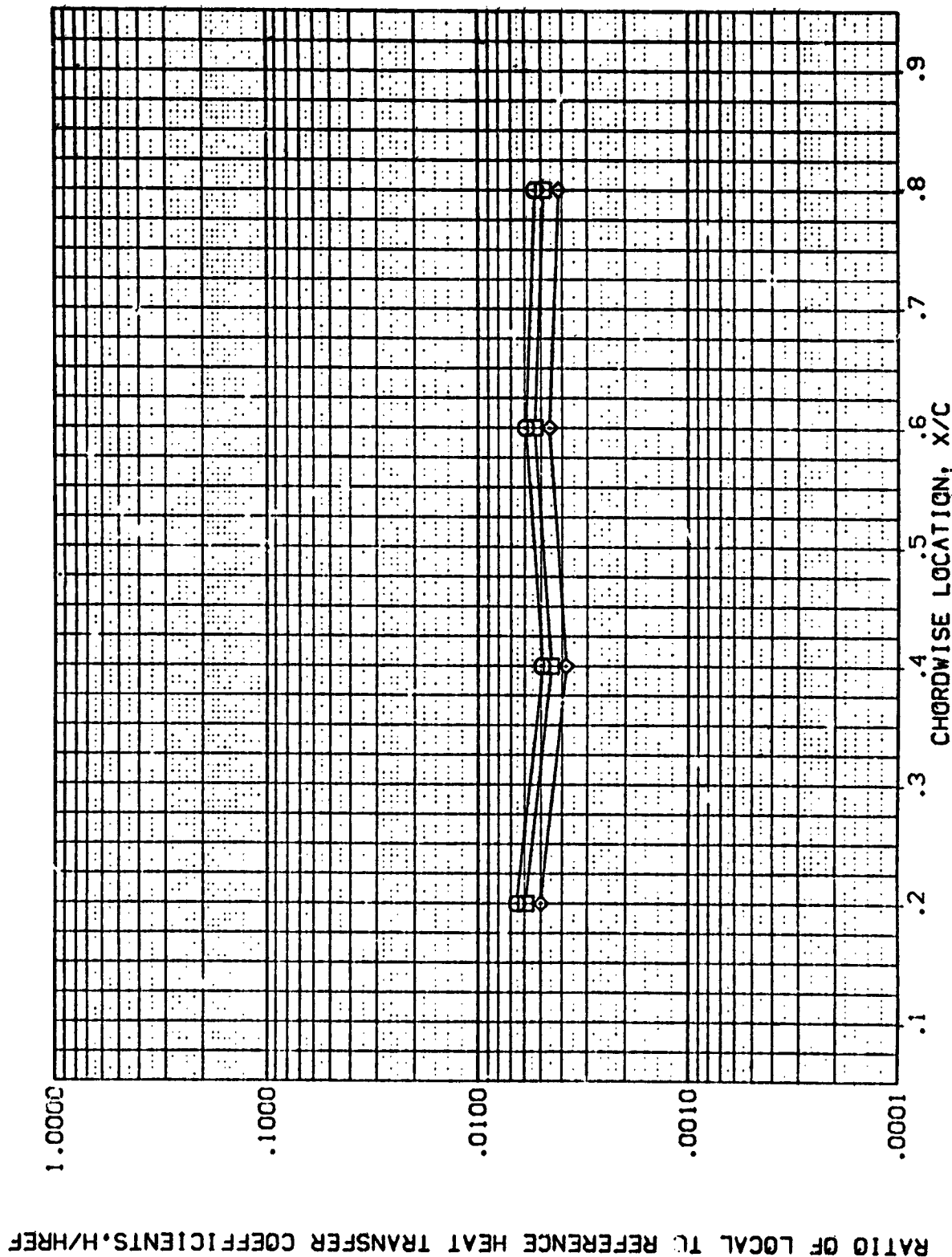


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF 1ANK

PARAMETRIC VALUES
ALPHA 120.000 BETA .000
RN/L 1.000

SYMBOL HAW/HT 2Y/B MACH
□ .850 .800 5.220
◇ .900 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

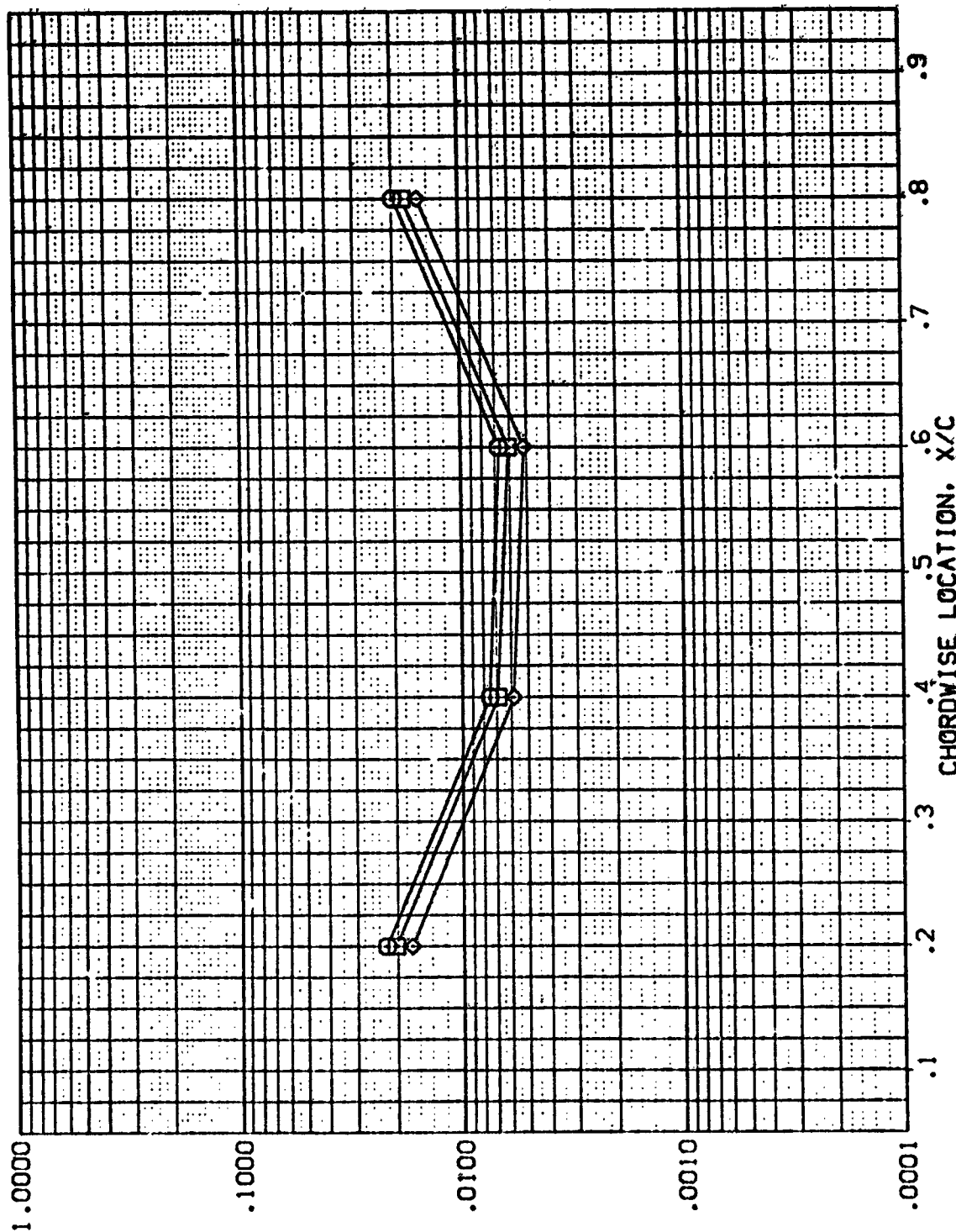


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G06)

PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RN/L 1.000

SYMBOLS
 X/AV/HT .850 MACH 5.220
 .900
 1.000

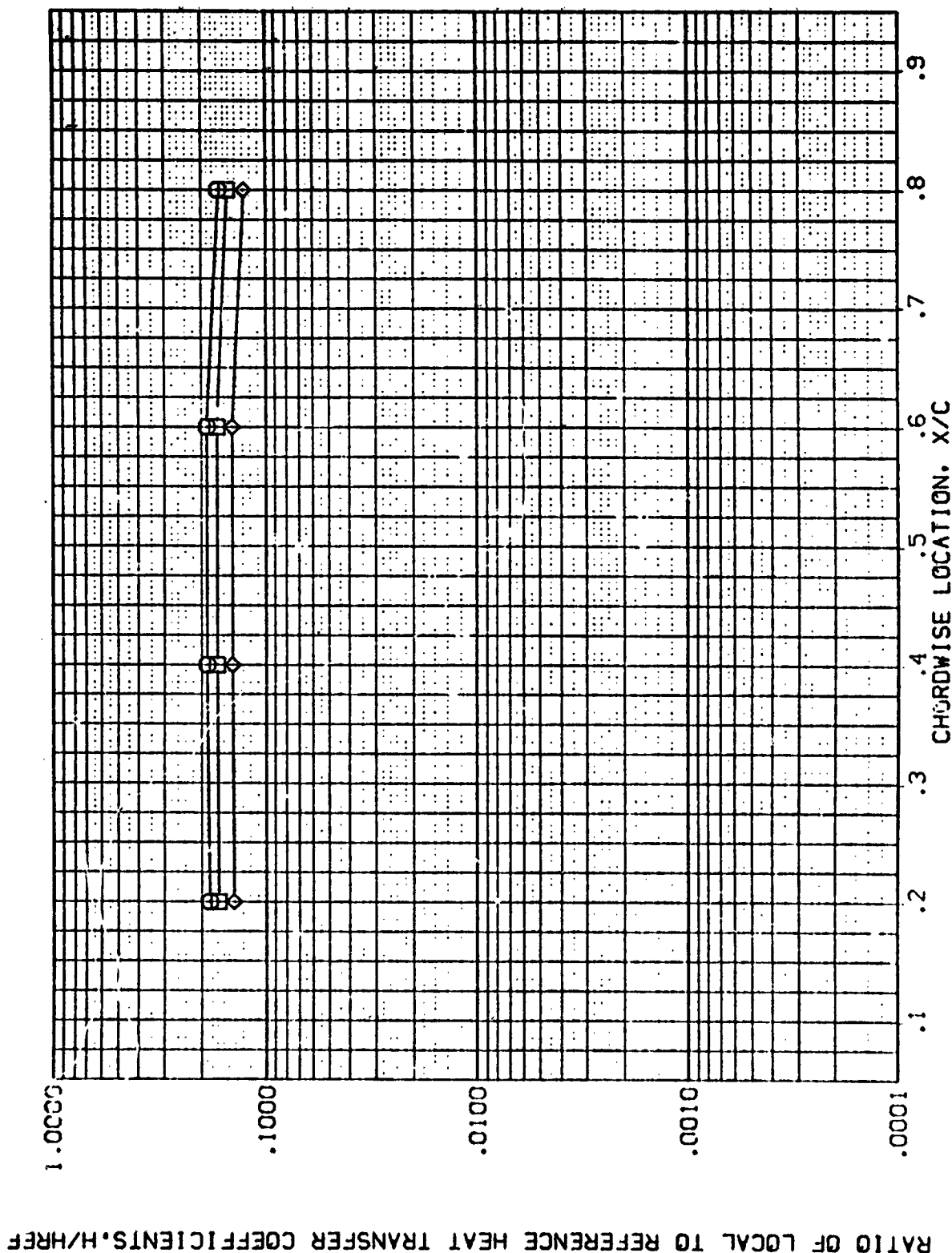


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE (REVG06)

PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RV/L 1.000

SYMBOL HAW/HT 2Y/B MACH
 .850 .600 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

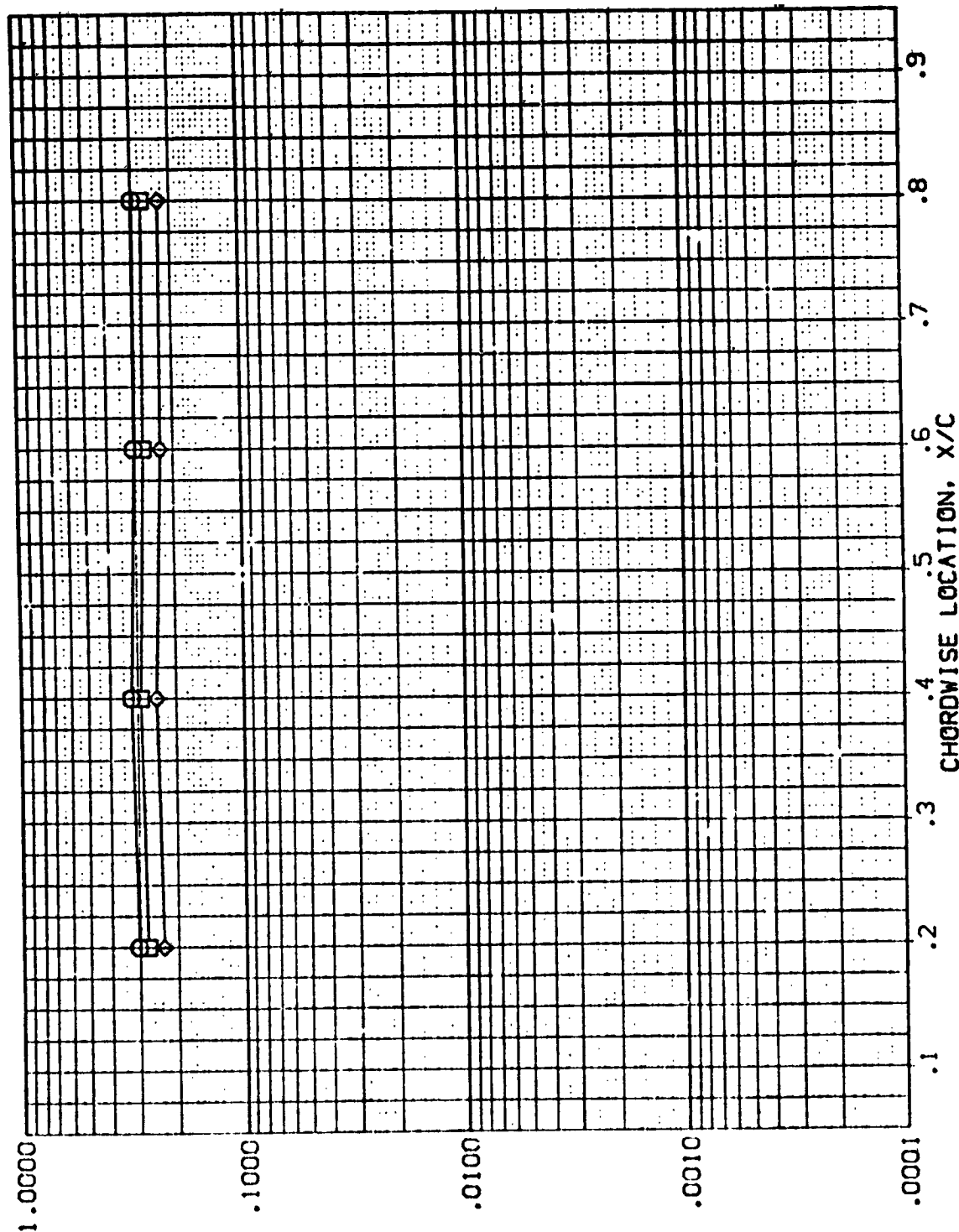


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV06)

SYMBOL	MAV/HT	2Y/B	MACH	PARAMETRIC VALUES
□	.850	.900	5.220	ALPHA -120.000
◇	.900			BETA 1.000
	1.000			

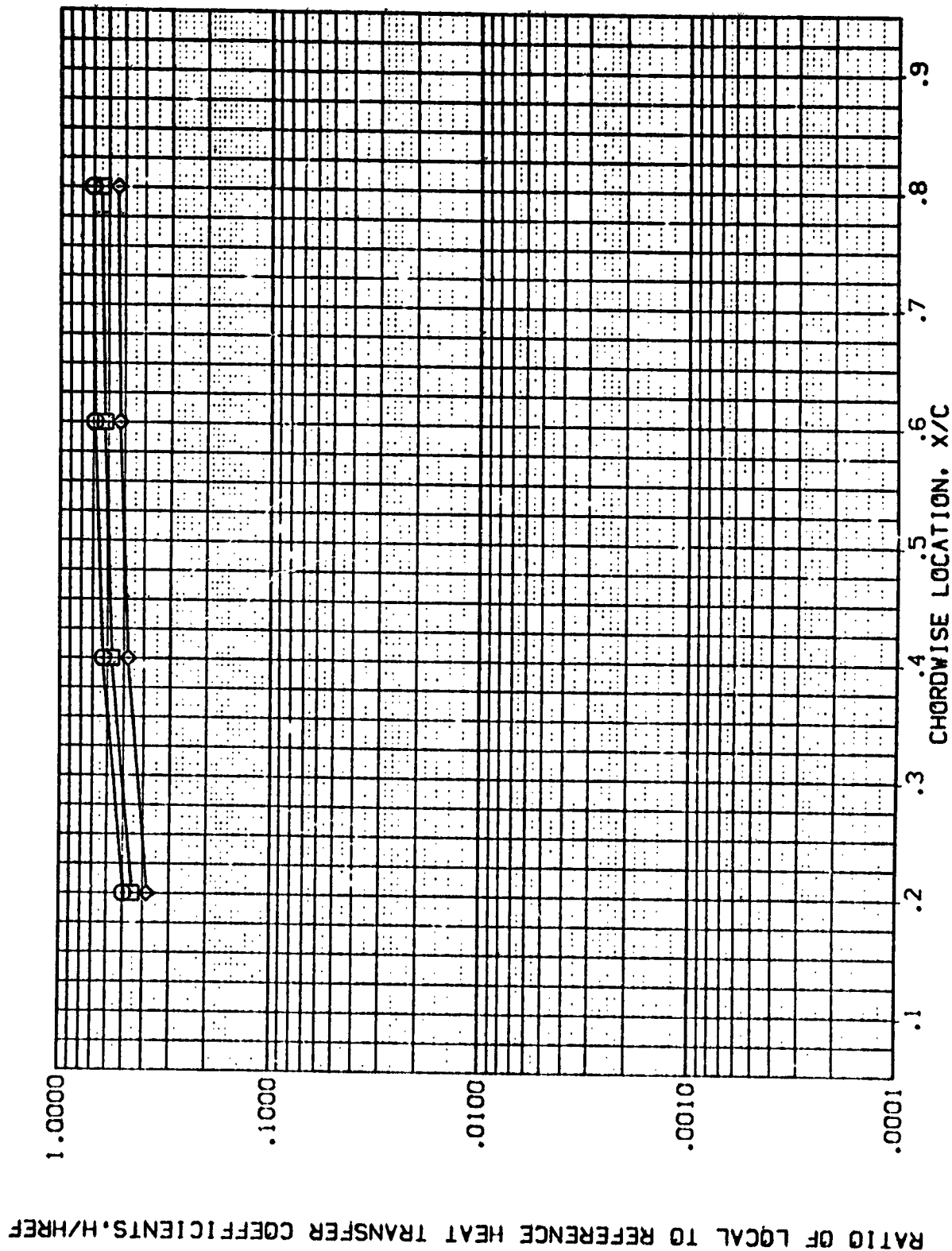


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REVG07)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

PARAMETER VALUES
 -90.000 BETA
 1.000

ALPHA
 RN/L

MACH
 5.219

SYMBOL
 HAW/HT
 .850
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

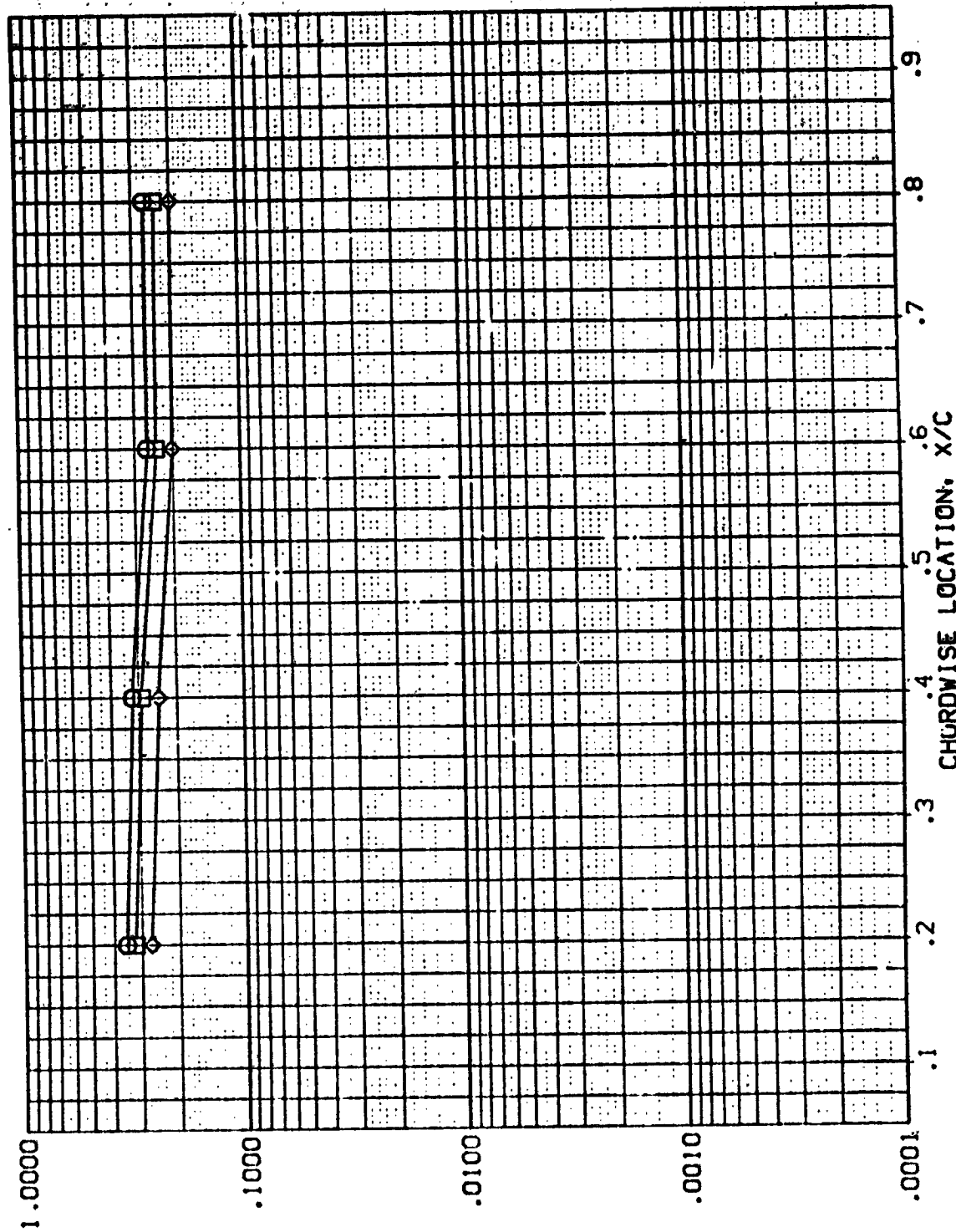


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G07)

PARAMETRIC VALUES
 ALPHA 3.000 BETA .000
 RN/L 0

SYMBOL MACH 2Y/B MACH
 .850 .600 5.219
 .900
 1.000

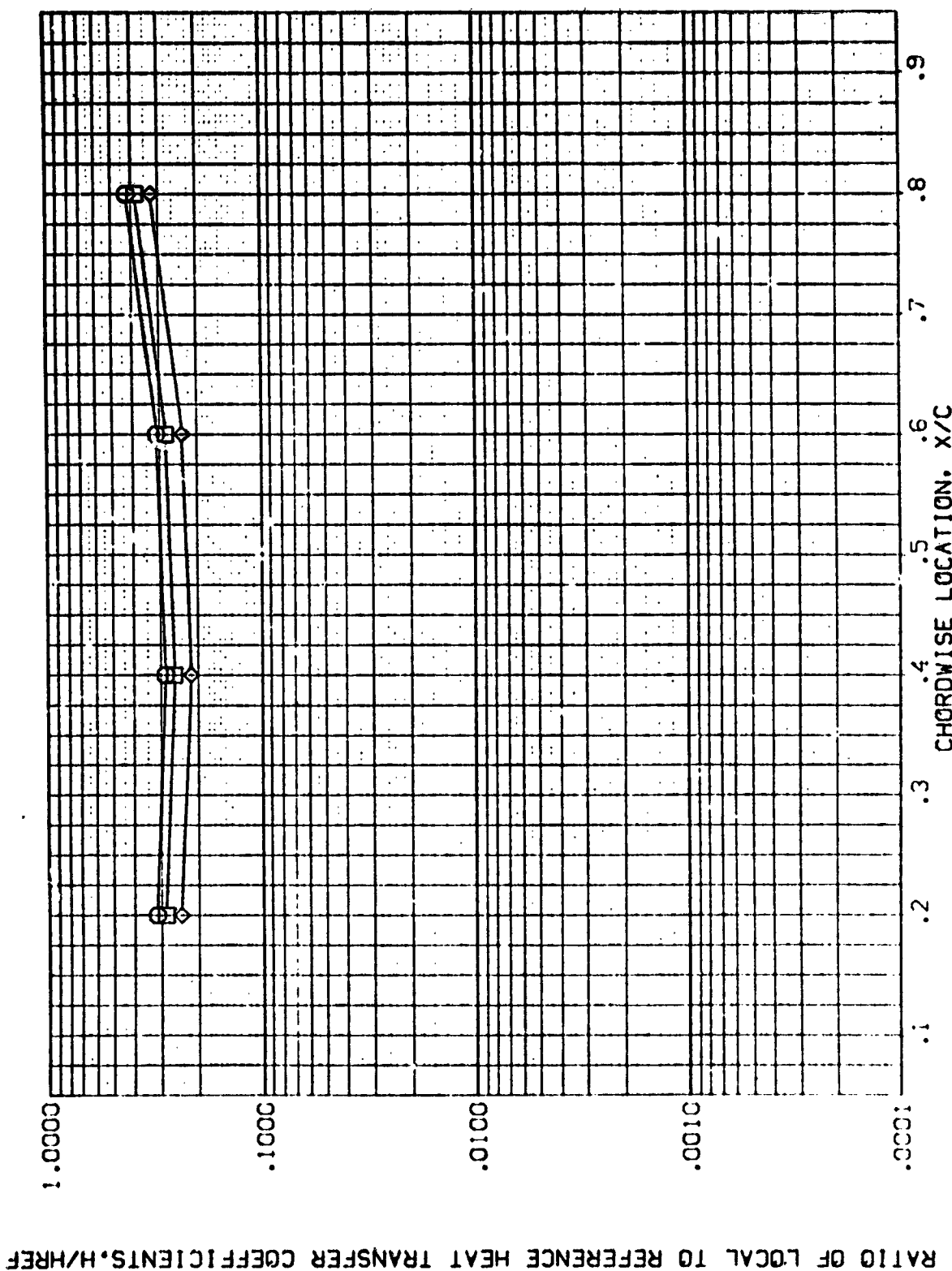


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G07)

SYMBOL
 □
 ◇

HAW/HT
 .850
 .900
 1.000

2Y/B
 .800

MACH
 5.219

PARAMETRIC VALUES
 -90.000 BETA
 .0000

ALPHA
 RN/L

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

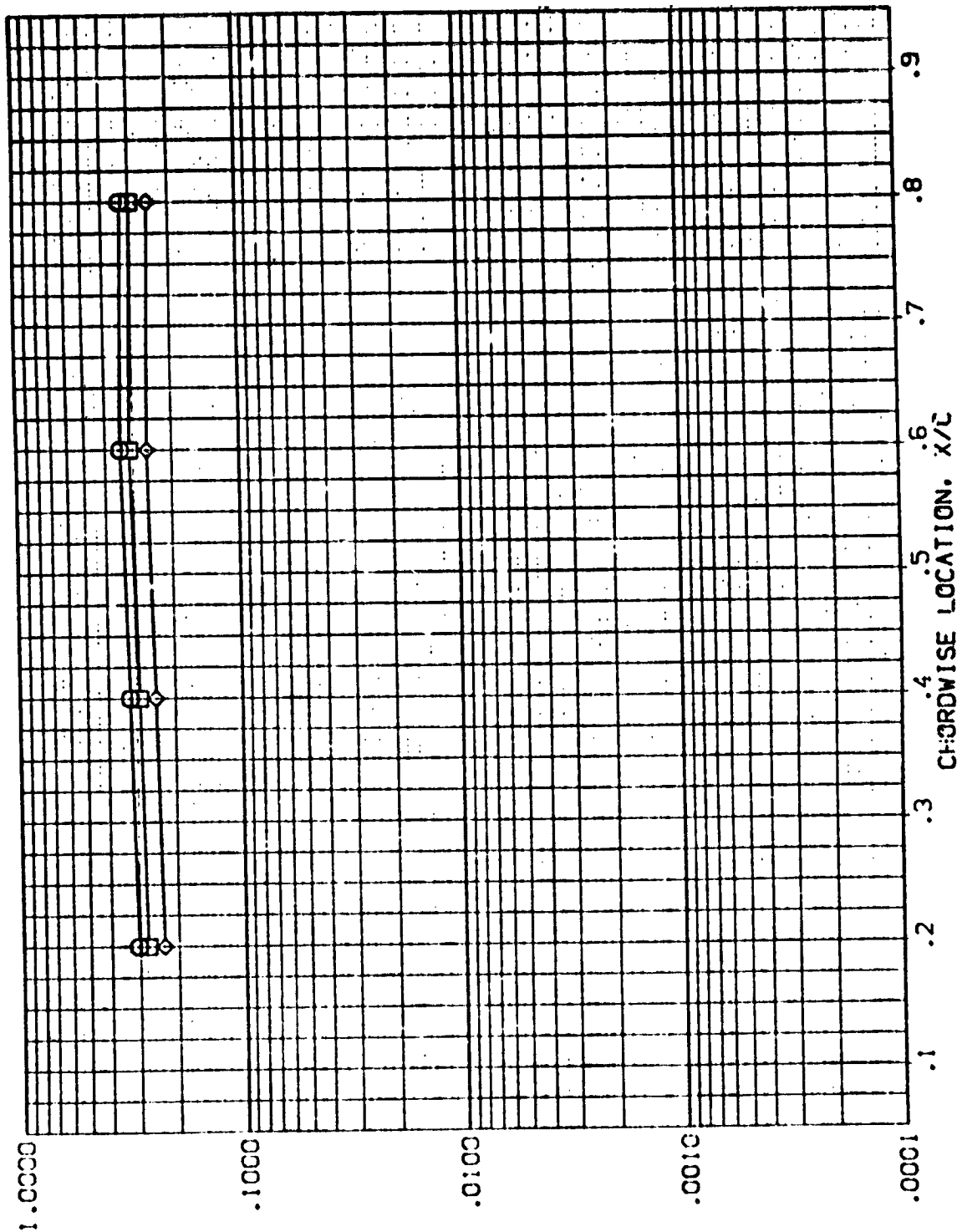


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG08)

SYMBOL	HAW/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
				RN/L	
◇	.850	.400	5.220	-60.000	1.000
□	.900				
	1.000				

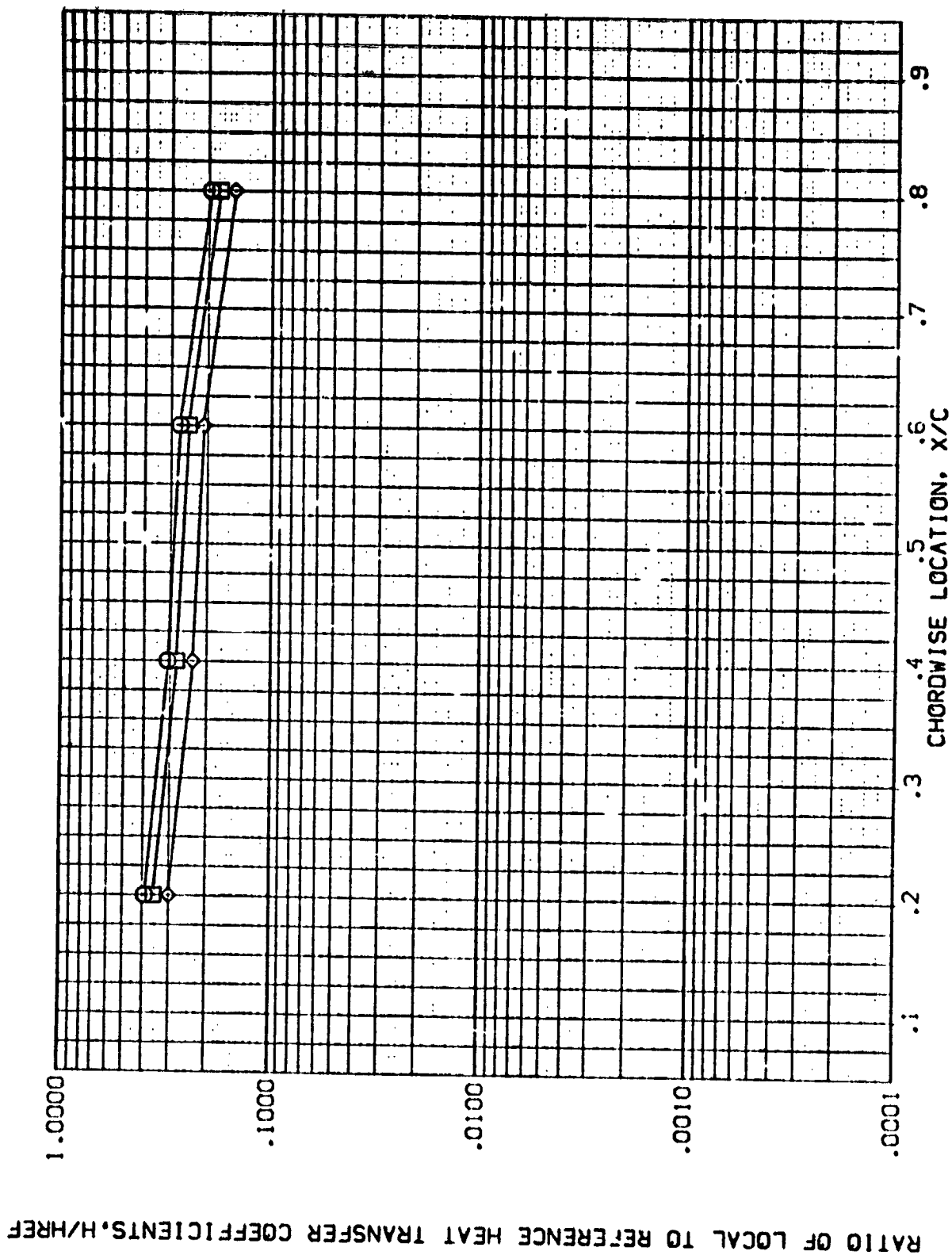


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV608)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

PARAMETRIC VALUES
ALPHA -60.000 BETA .000
RN/L 1.000

SYMBOL \diamond \square
HAW/HT .850
MACH 5.220
2Y/B .600
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

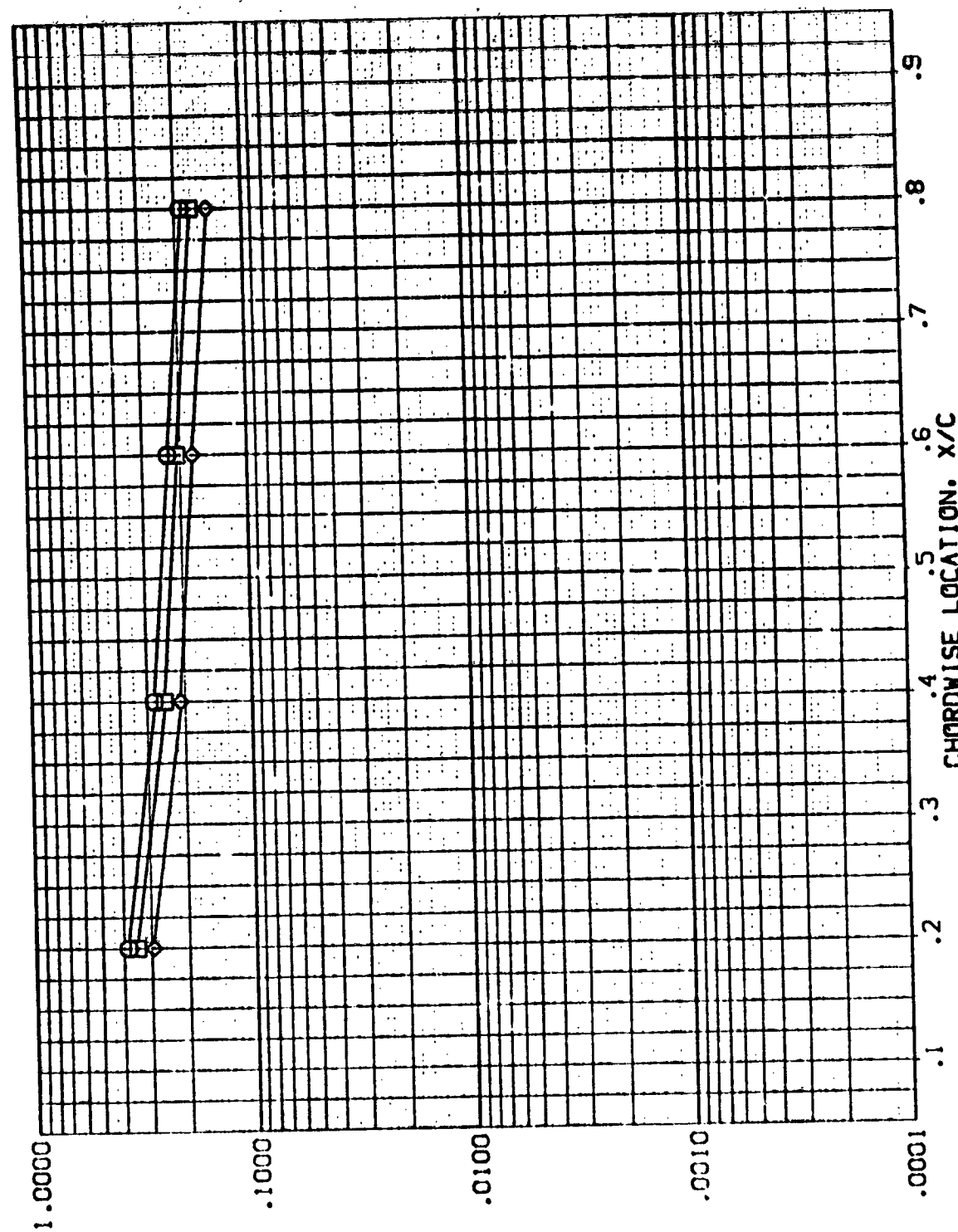


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

REF ID: A60111
ORIGINAL PAGE IS 20

(REV608)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

PARAMETRIC VALUES
 ALPHA -60.0000 BETA .000
 RN/L .000

SYMBOL MAW/HT 2^{1/8} MACH
 .850 .800 5.220
 .900
 1.000

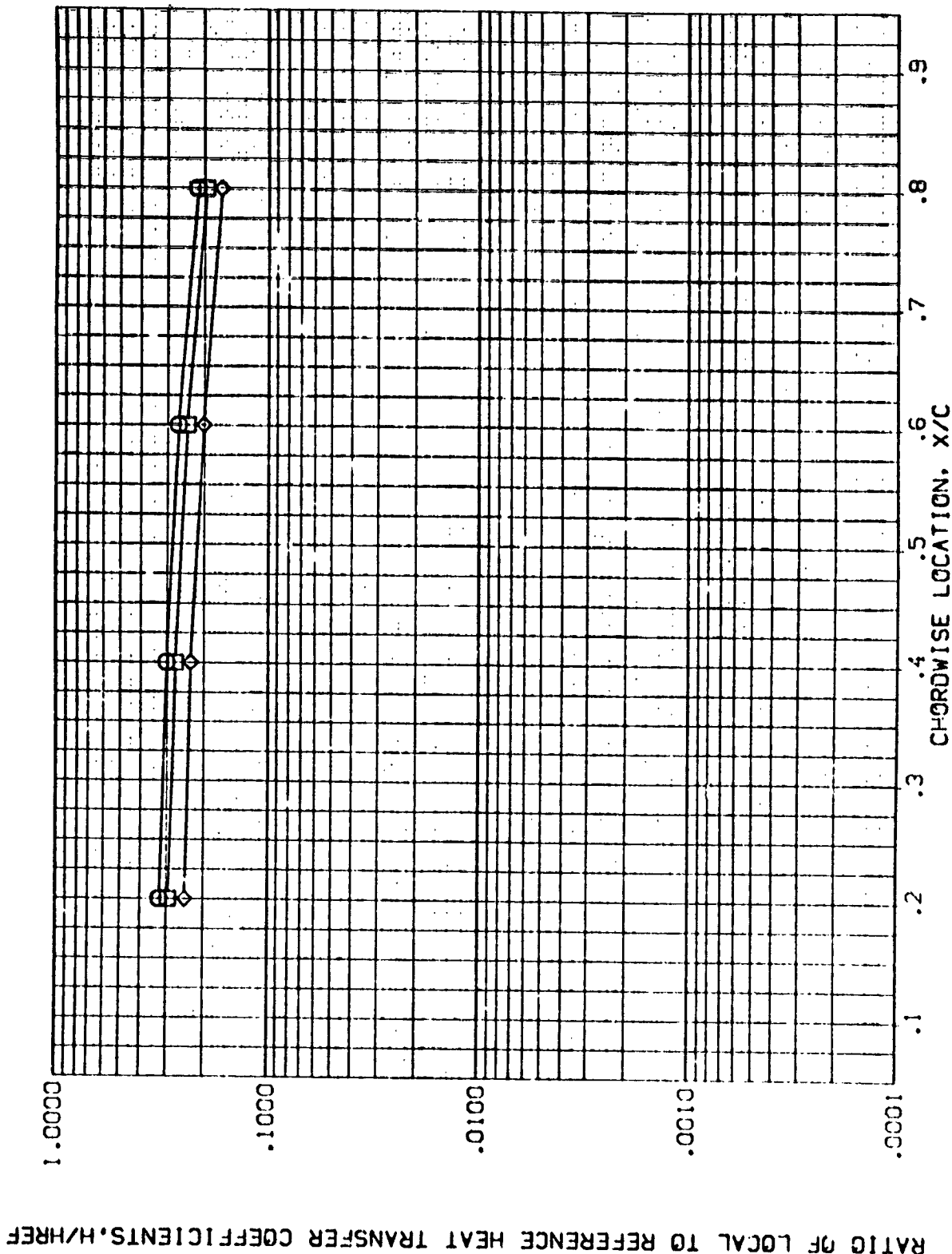


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG09)

SYMBOL
□
◇

HAW/HT
.850
.900
1.800

2Y/B
.400

MACH
5.220

PARAMETRIC VALUES
ALPHA
RN/L
-30.000
1.000
BETA
.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

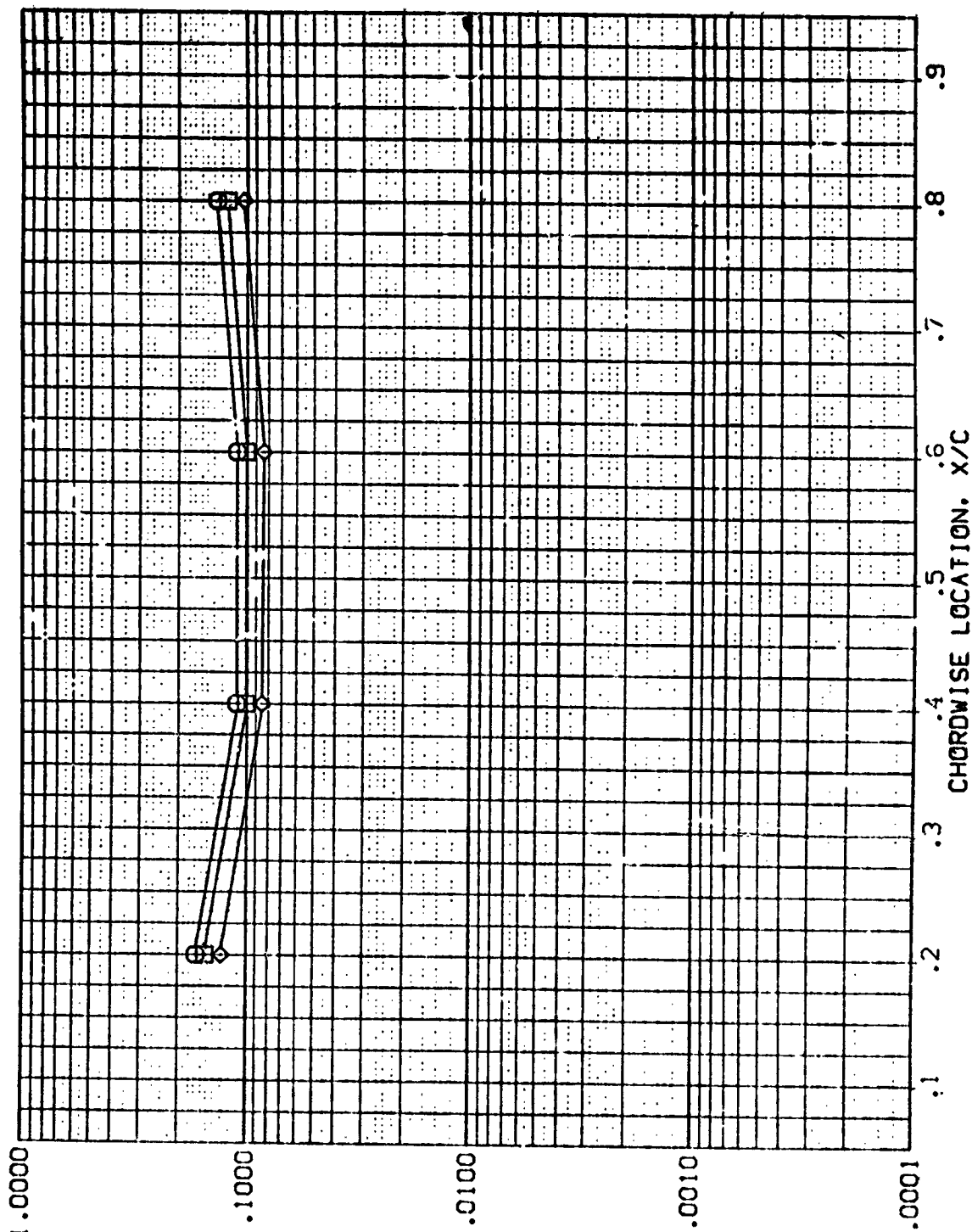


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV09)

SYMBOL	HAW/HT	ZY/B	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	.600	5.229	-30.000	.000
□	.900			1.000	
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

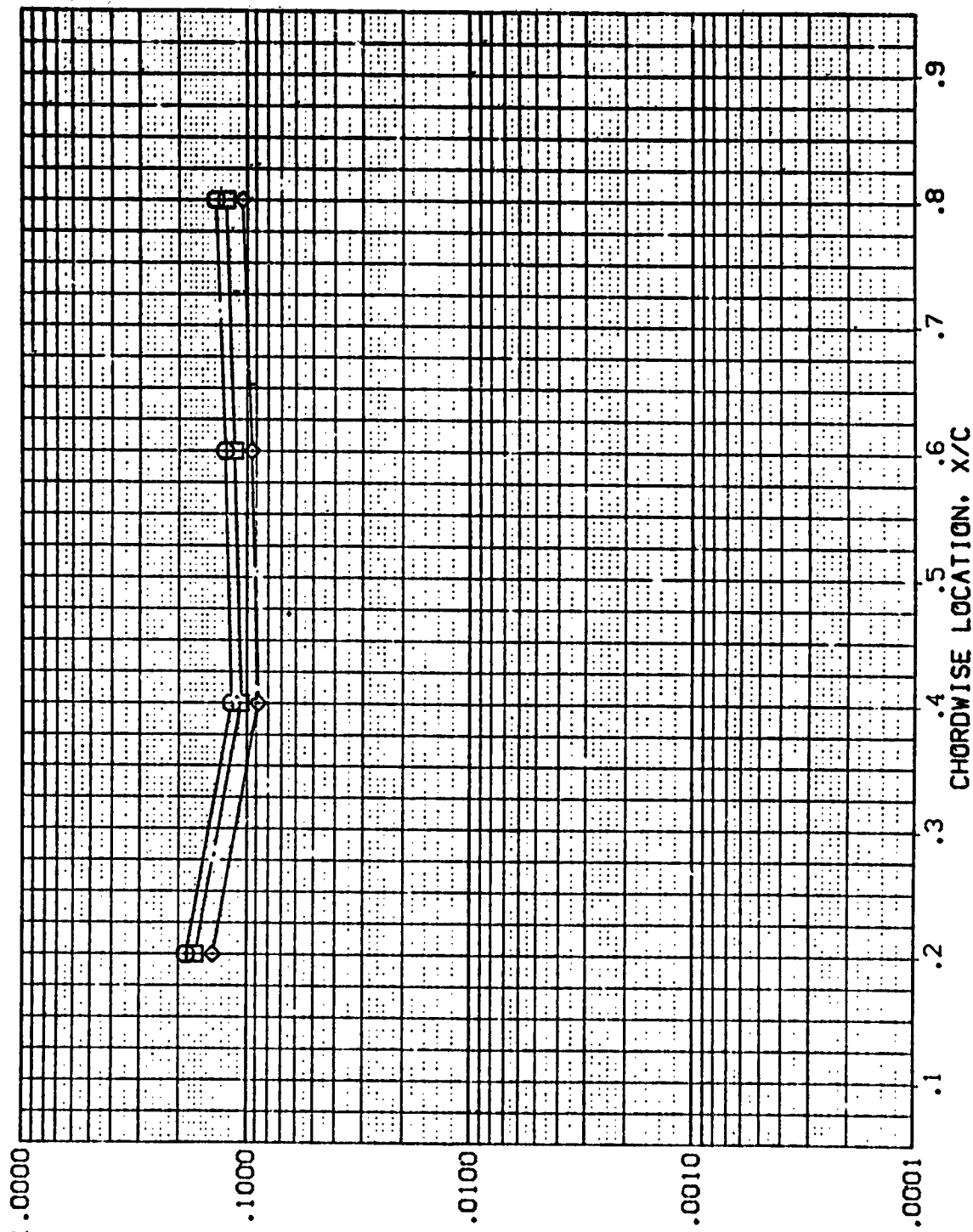


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

SYMBOL
 ◇
 □
 ○

MAN/HT .850
 2Y/B .800
 MACH 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA .000
 RN/L .000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

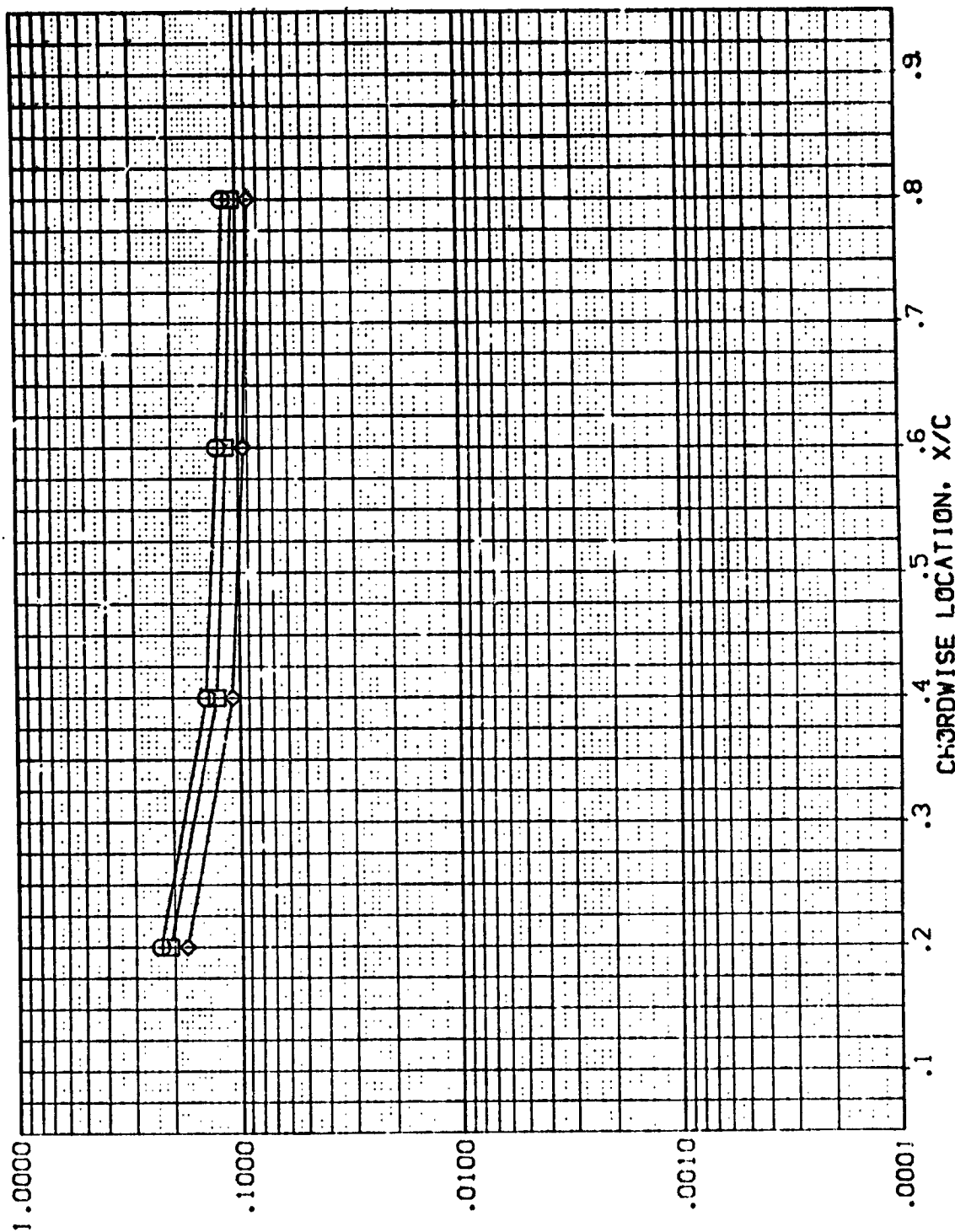


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG10)

SYMBOL
 ◇
 □

MAV/HT 2Y/B MACH
 .850 .400 5.299
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 60.000
 RN/L 4.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

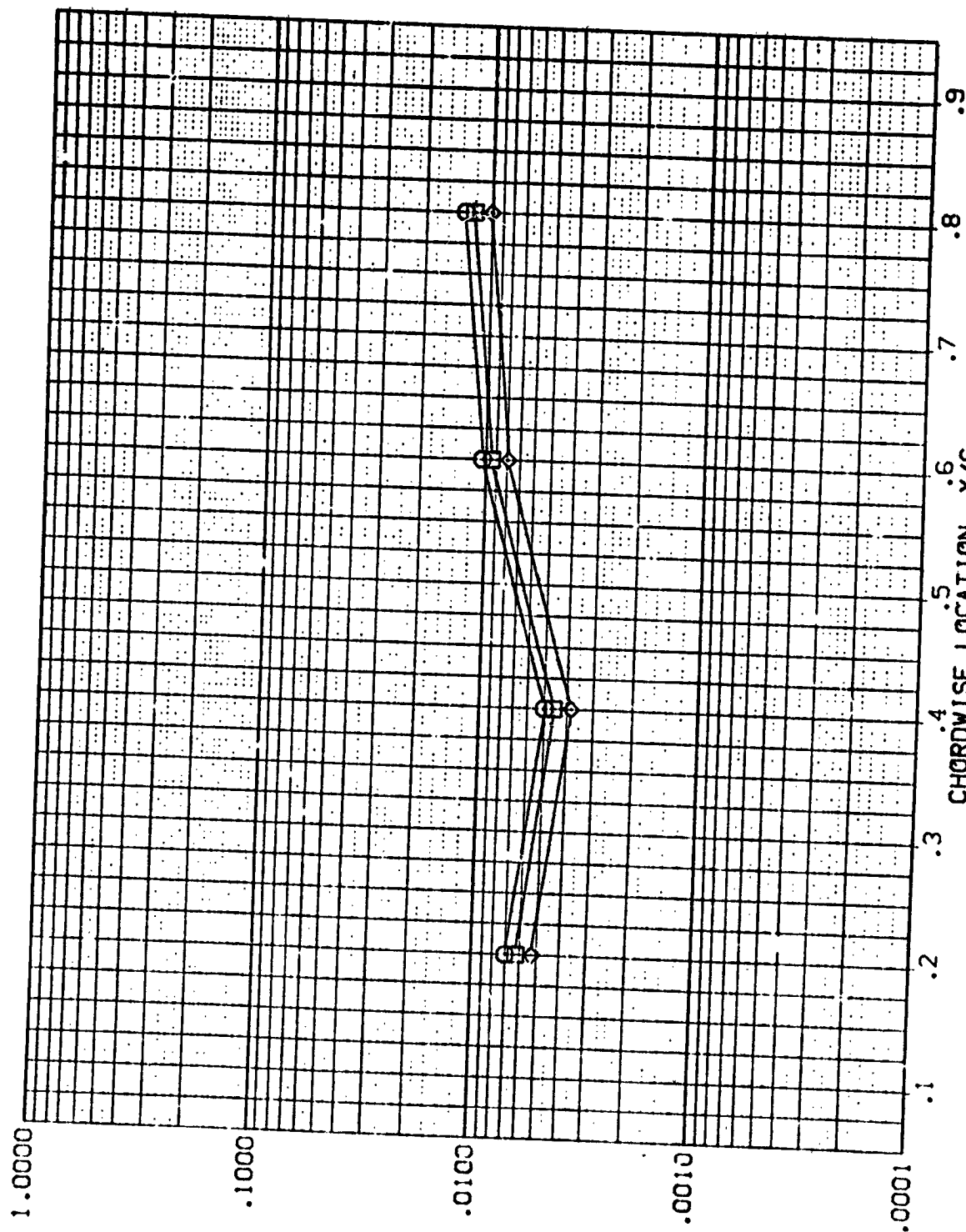


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV G10)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

PARAMETRIC VALUES

60.C 3 BETA

.000

ALPHA

RN/L

MACH

5.299

2Y/B

.600

HAW/HT

.850

.900

1.000

SYMBOL

◇ □

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

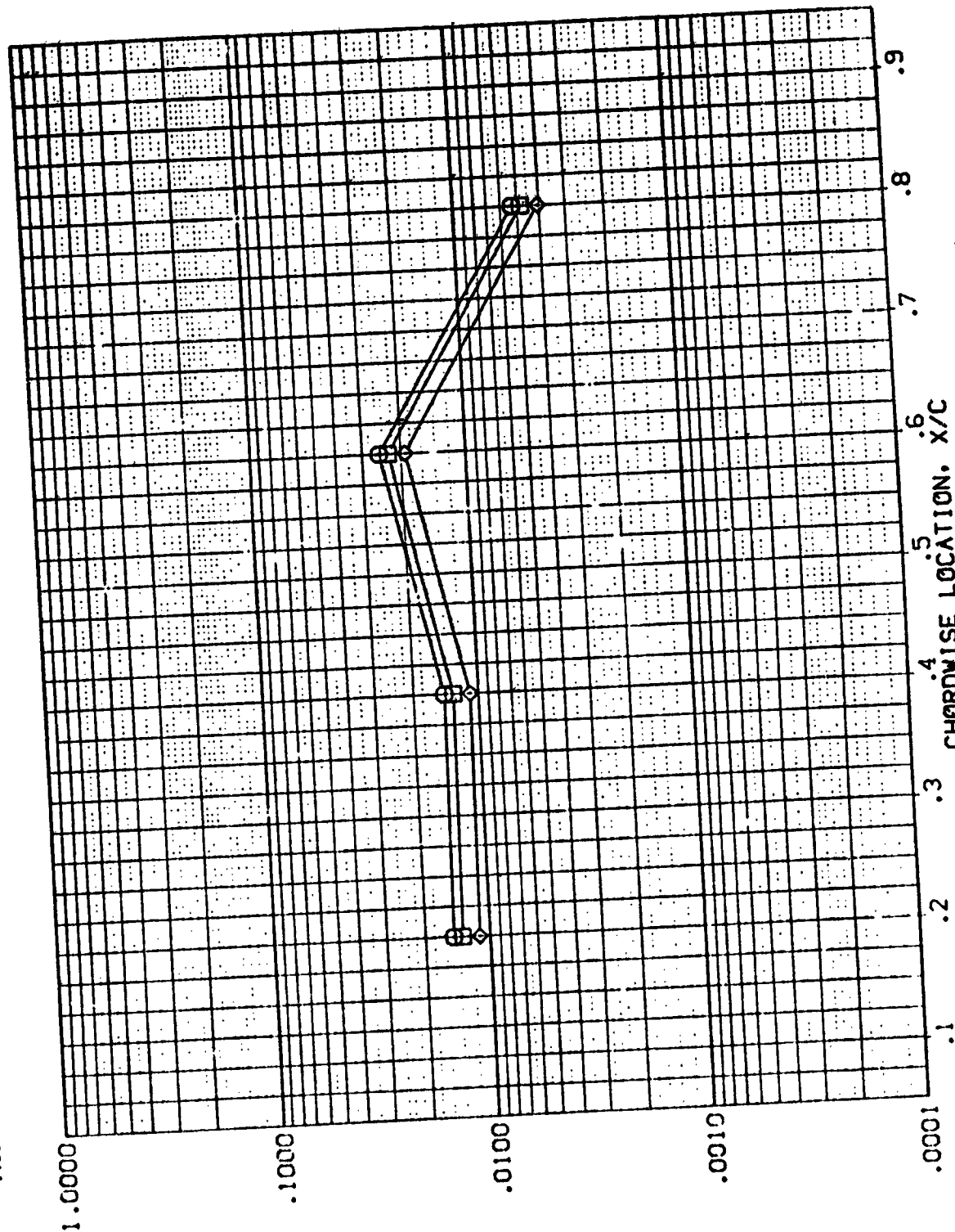


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG10)

PARAMETRIC VALUES
 ALPHA 60.000 BETA 4.000
 RN/L

SYMBOL HAW/HT 2Y/B MACH
 .850 .800 5.299
 .900
 1.000

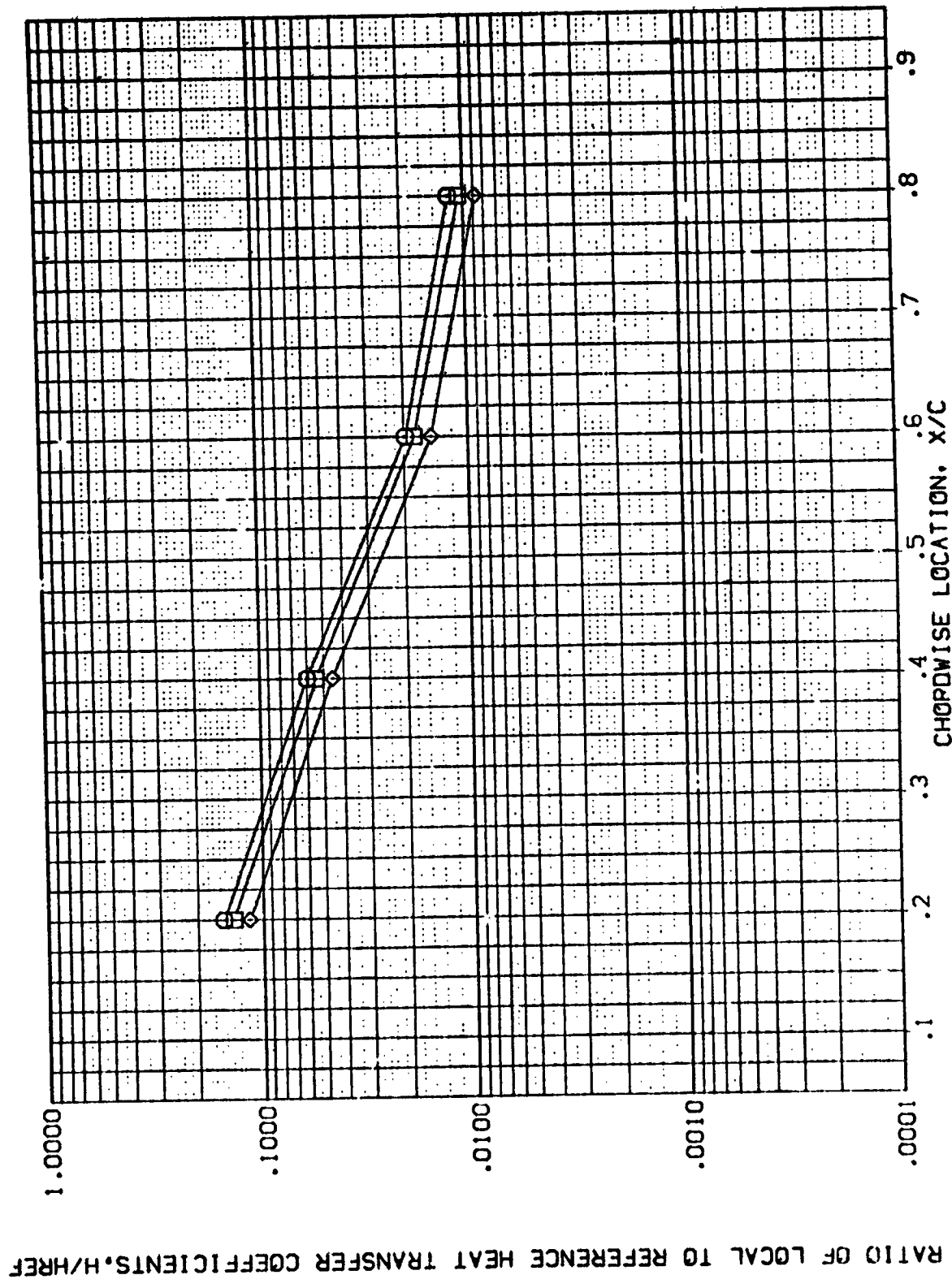


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE (REV G11)

SYMBOL	MAX/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
◇	.850	.400	5.300	30.000	.000
□	.900			4.000	
◇	1.000				

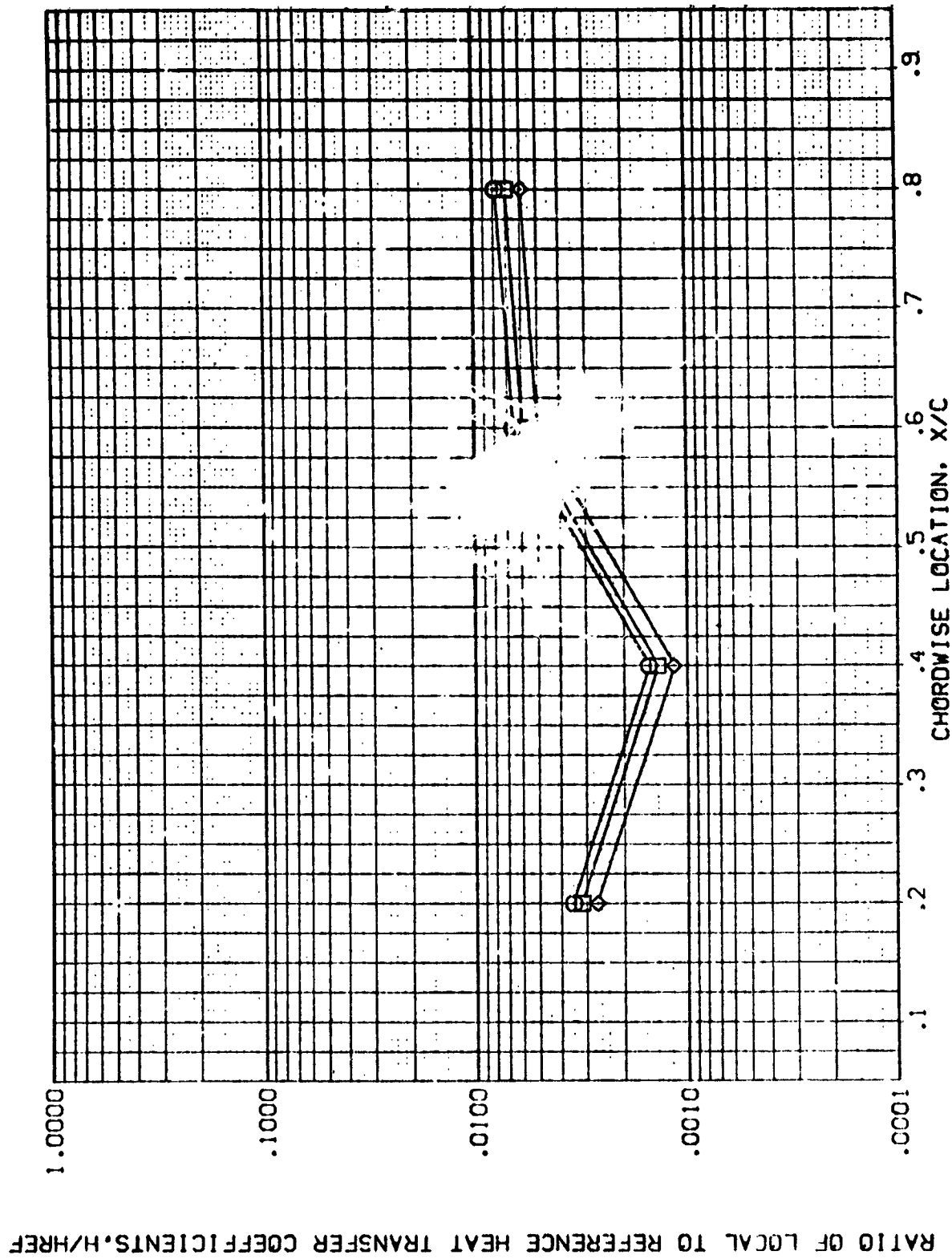


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV311)

SYMBOL
 ○
 □
 ◇

HAW/HT
 .850
 .900
 1.000

2Y/B
 .600

MACH
 5.300

PARAMETRIC VALUES
 ALPHA
 RN/L
 30.000
 4.000

BETA
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

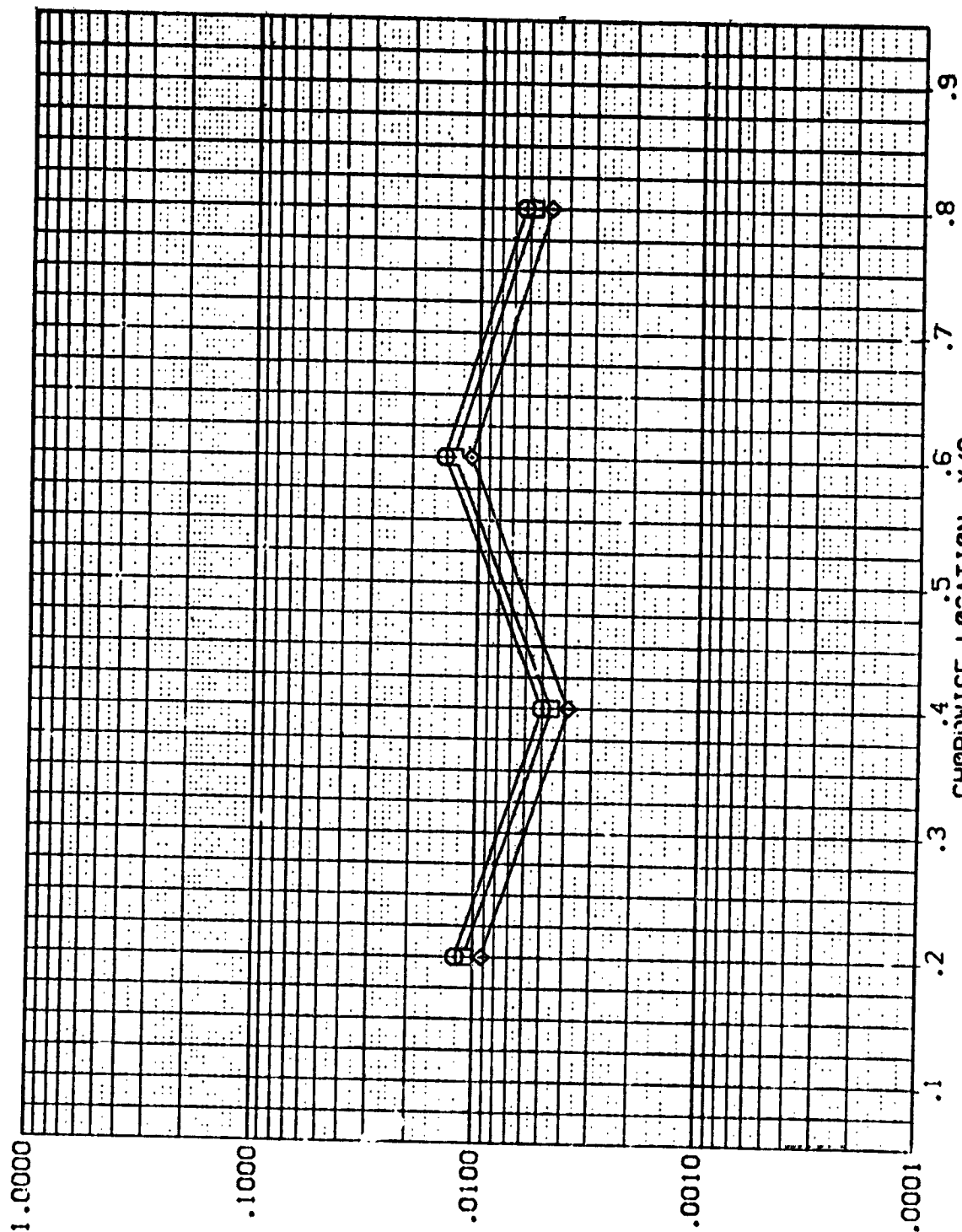


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE (REV G11)

SYMBOL	MAN/HT	2Y/B	MACH	PARAMETRIC VALUES	
				ALPHA RV/L	BETA
◇	.850	.800	5.300	30.000	.000
□	.900			4.000	
◇	1.000				

RA, OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

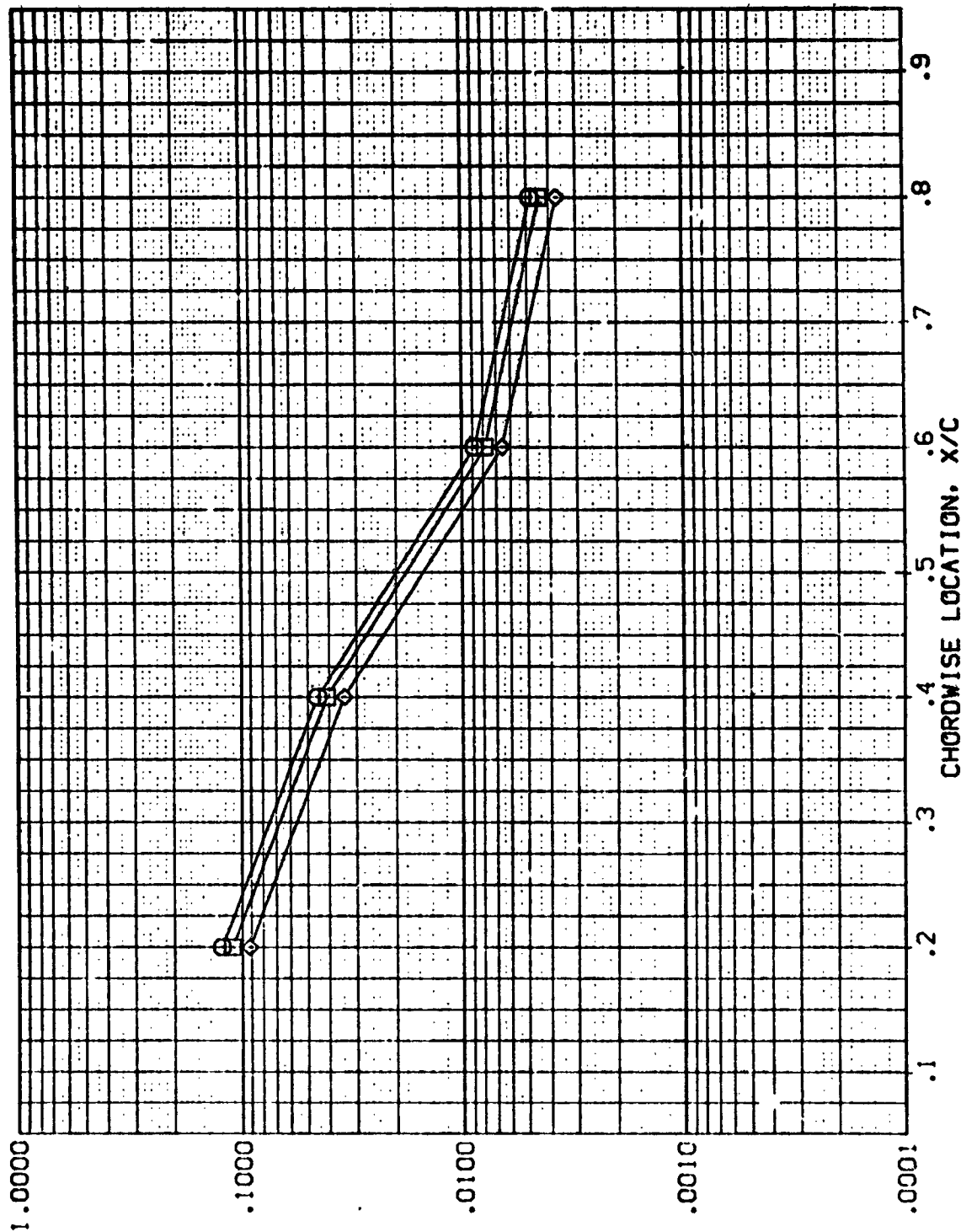


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G12)

SYMBOL	MAW/HT	2Y/B	MACH	ALPHA	PARAMETRIC VALUES
□	.850	.400	5.220	RV/L	30.000 BETA
◇	.900				1.000
	1.000				-5.000

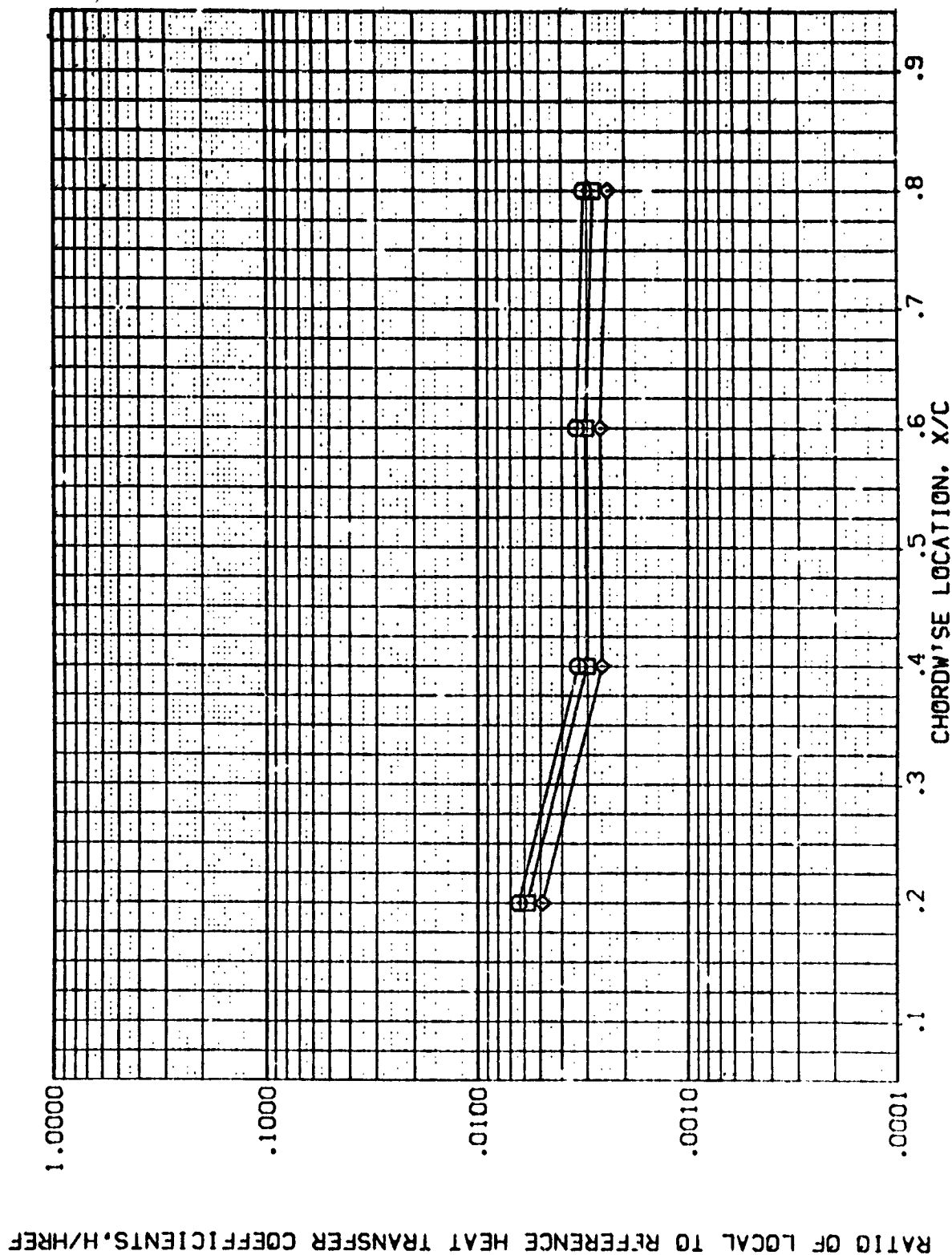


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REVG12)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

PARAMETRIC VALUES
ALPHA 30.000 BETA -5.000
RN/L 1.000

SYMBOL HAW/HT 2Y/B MACH
◇ .850 .600 5.220
□ .900
◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

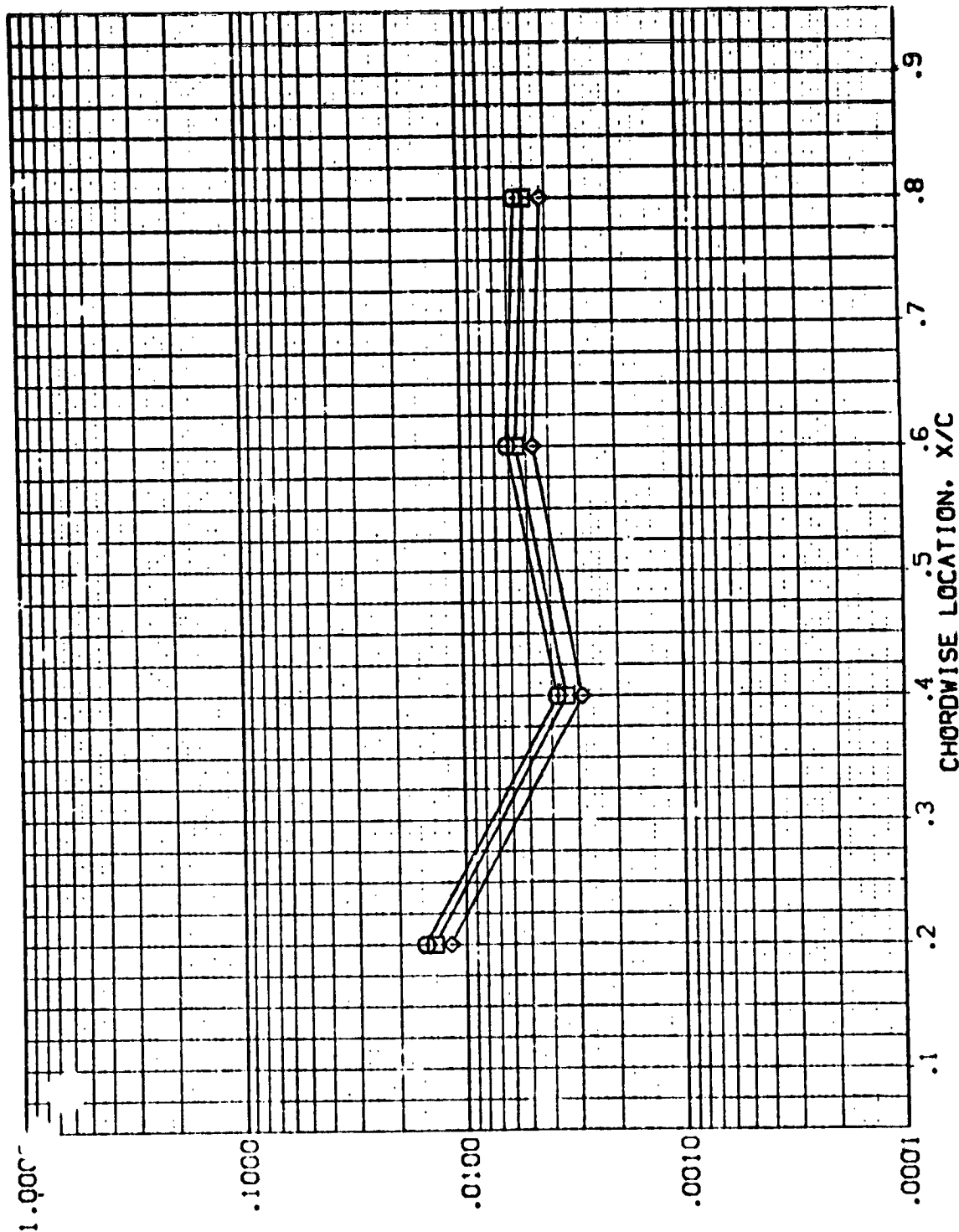


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G12)

PARAMETRIC VALUES
 ALPHA 30.000
 BETA 1.000
 -5.000

SYMBOL HAW/HT 2Y/B MACH
 .850 .800 5.220
 .900
 1.000

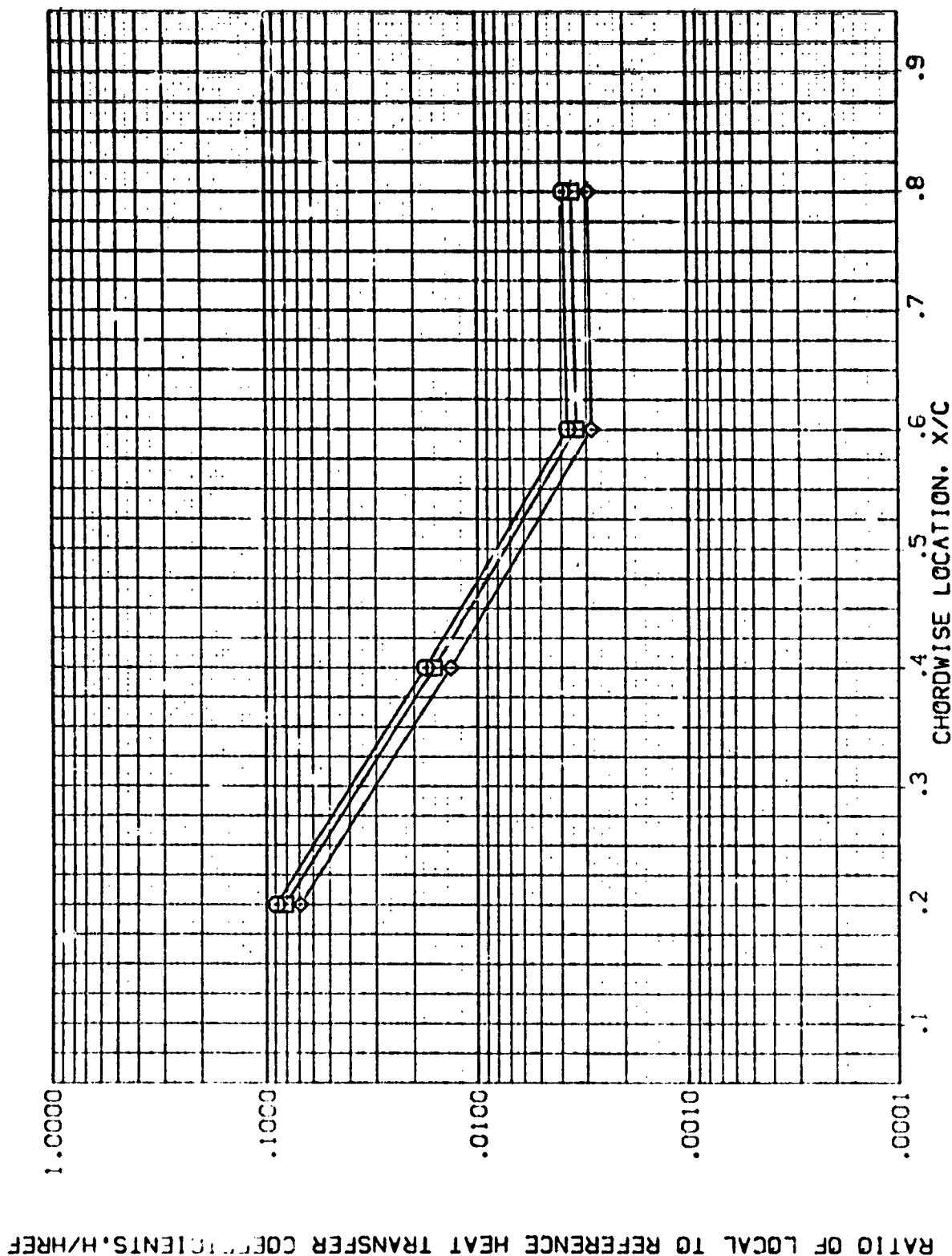


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV601)

SYMBOL \square \diamond
 HAW/HT .850 .900 1.000
 X/C .200
 MACH 5.228

PARAMETRIC VALUES
 ALPHA .C.30 BETA .000
 RN/L 1.000

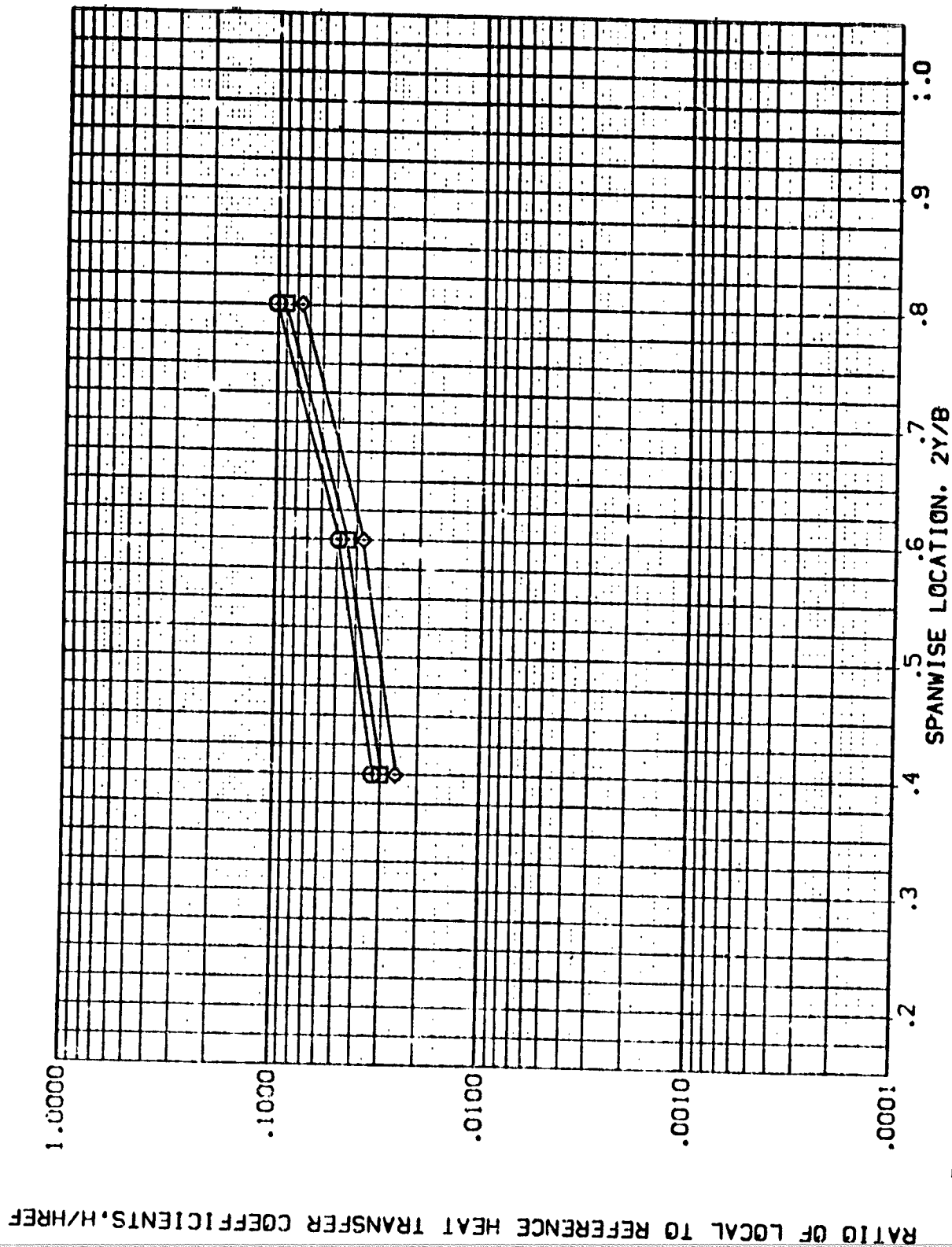


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G01)

SYMBOL	HA/W/T	X/C	MACH	PARAMETRIC VALUES
◇	.850	.400	5.228	ALPHA
□	.900			RN/L
◇	1.000			BETA
				.000

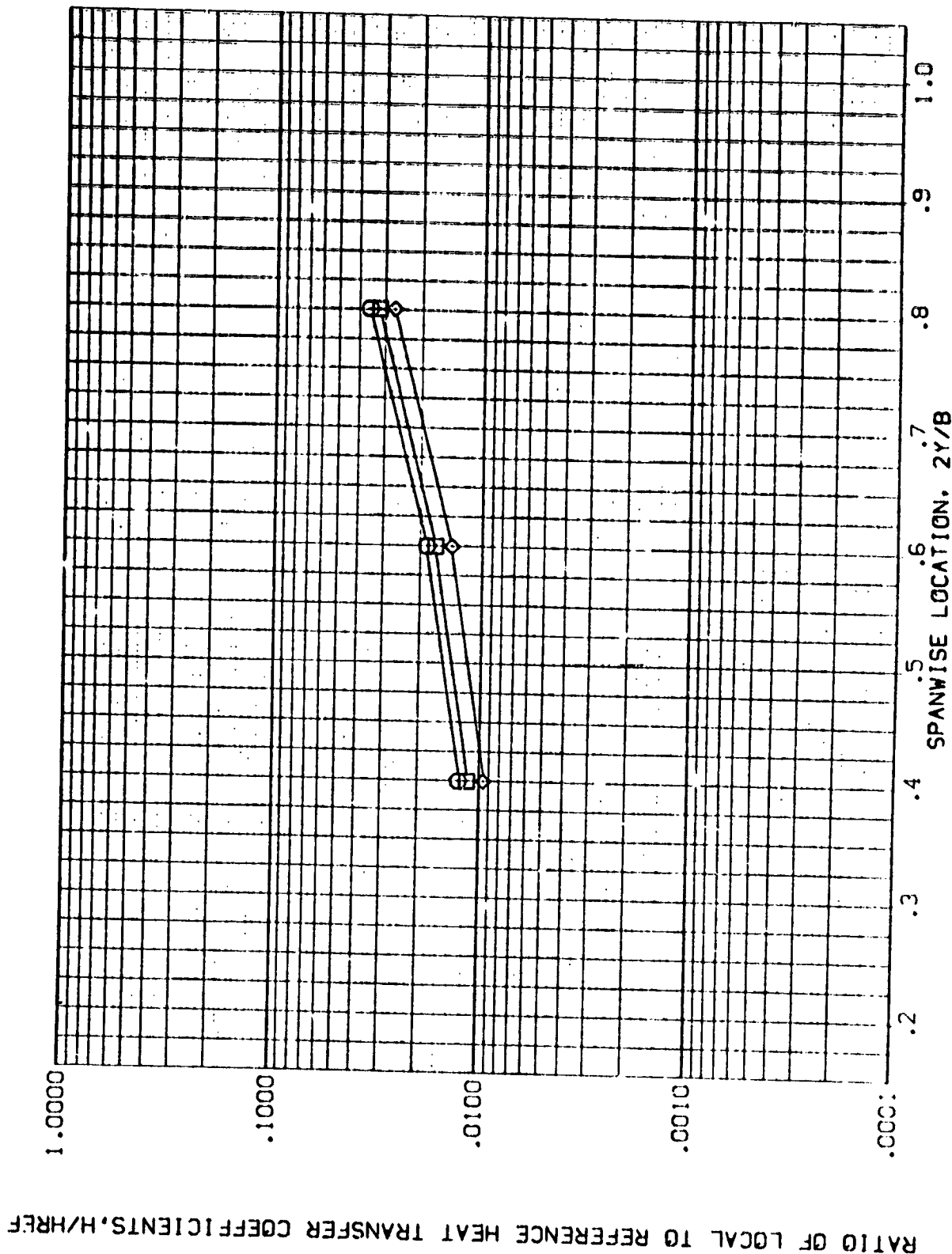


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV001)

SYMBOL
 \diamond
 \square
 \circ

HAU/HT X/C MACH
 .850 .600 5.228
 .900
 1.000

PARAMETRIC VALUES
 ALPHA .000
 RN/L 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

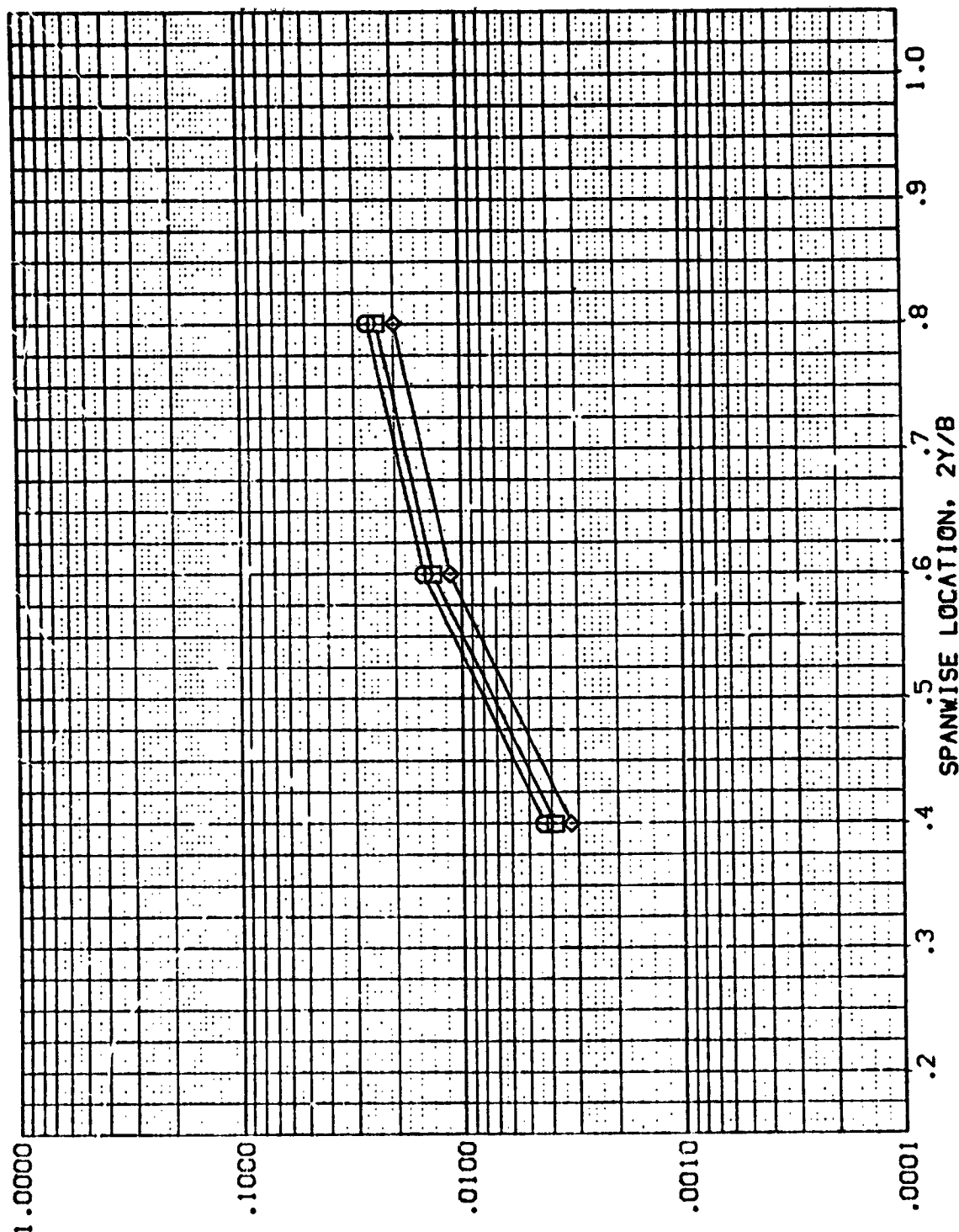


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

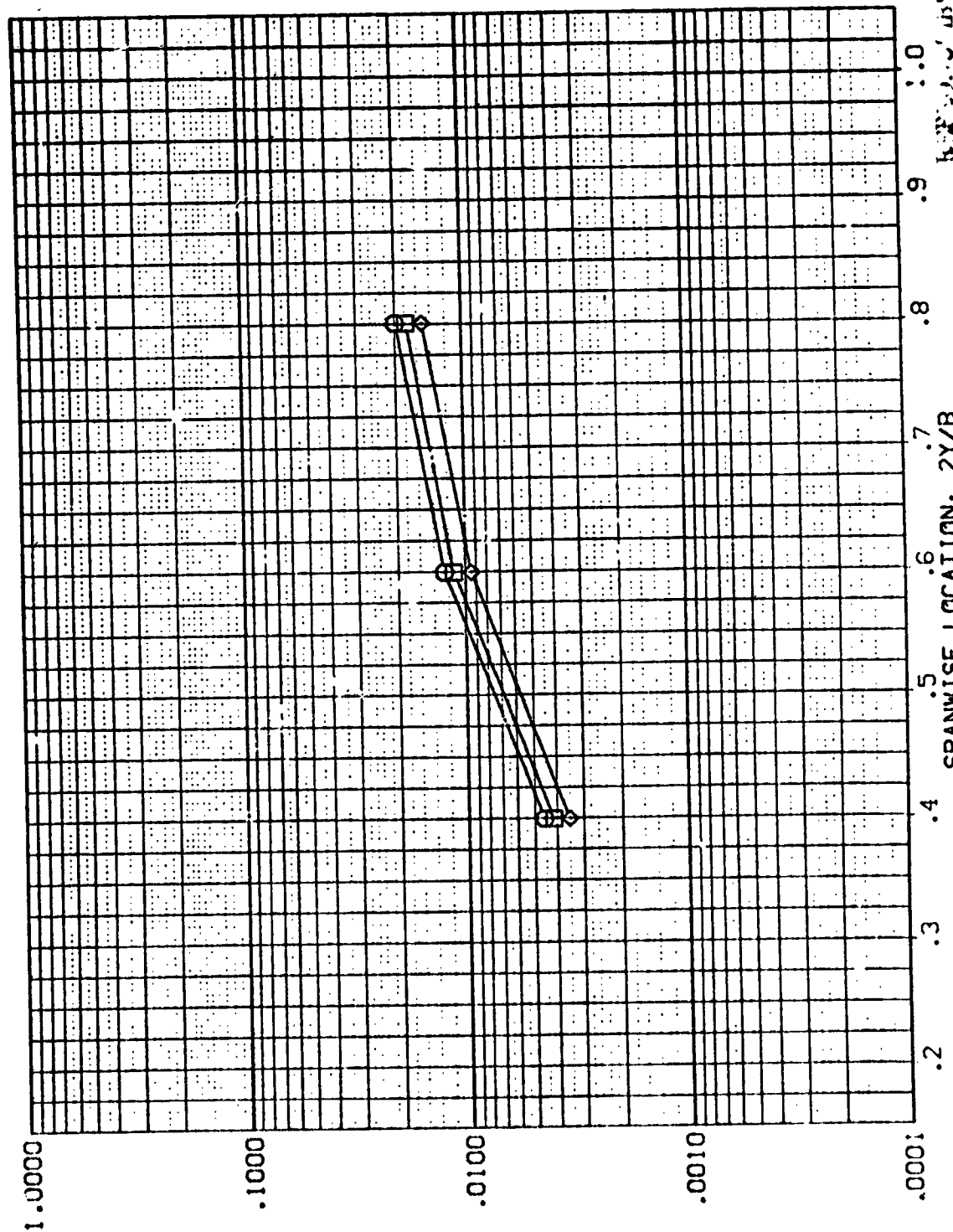
AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV601)

PARAMETRIC VALUES
 .C70 BETA .000
 1.000

ALPHA
 RN/L

SYMBOL
 HAN/HT X/C MACH
 .850 .800 5.228
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF



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FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV602)

SYMBOL	MAV/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.200	5.219	ALPHA 30.000
□	.900			BETA 1.000
	1.000			

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

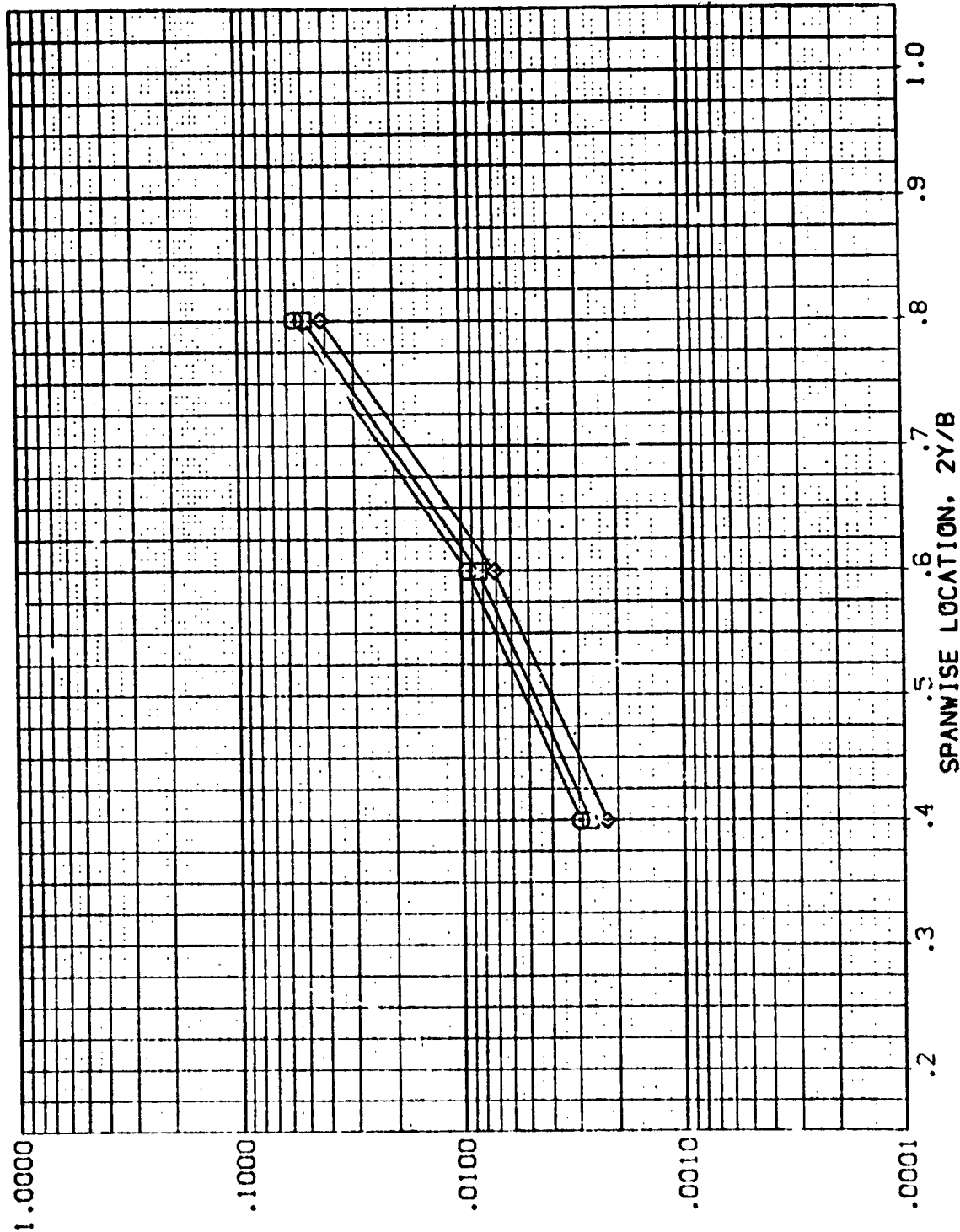


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G02)

SYMBOL	<div> <div>◇</div> <div>□</div> <div>○</div> </div>	HAU/HT	X/C	MACH	PARAMETRIC VALUES		
		.850	.400	5.219	ALPHA	30.0°	
		.900			RV/L	1.000	
		1.000				BETA	.000

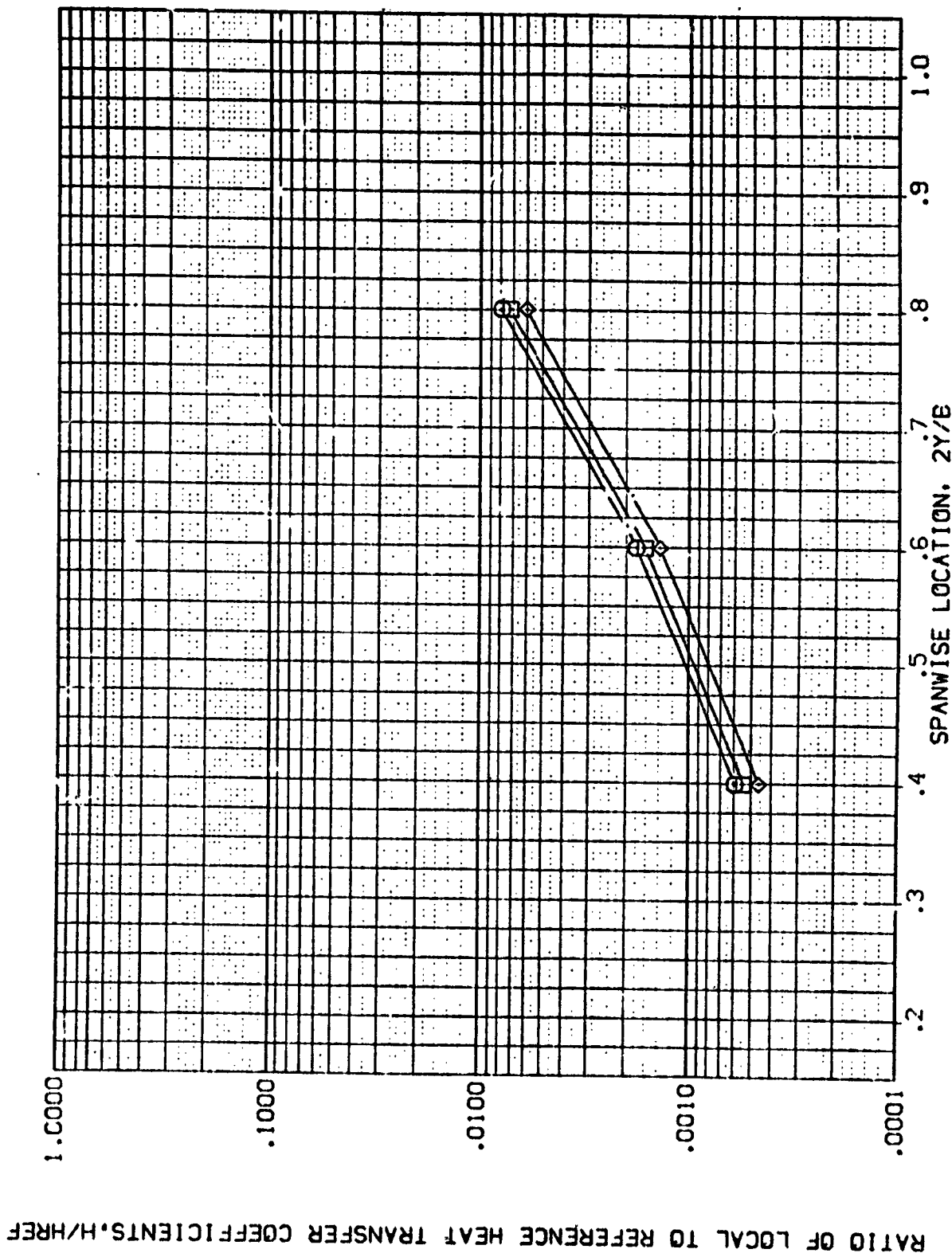


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV002)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

PARAMETRIC VALUES
 30.000 BETA
 1.000

ALPHA
 RN/L

MACH
 5.219

X/C
 .600

HAW/HT
 .850
 .900
 1.000

SYMBOL
 ◇
 □
 ○

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

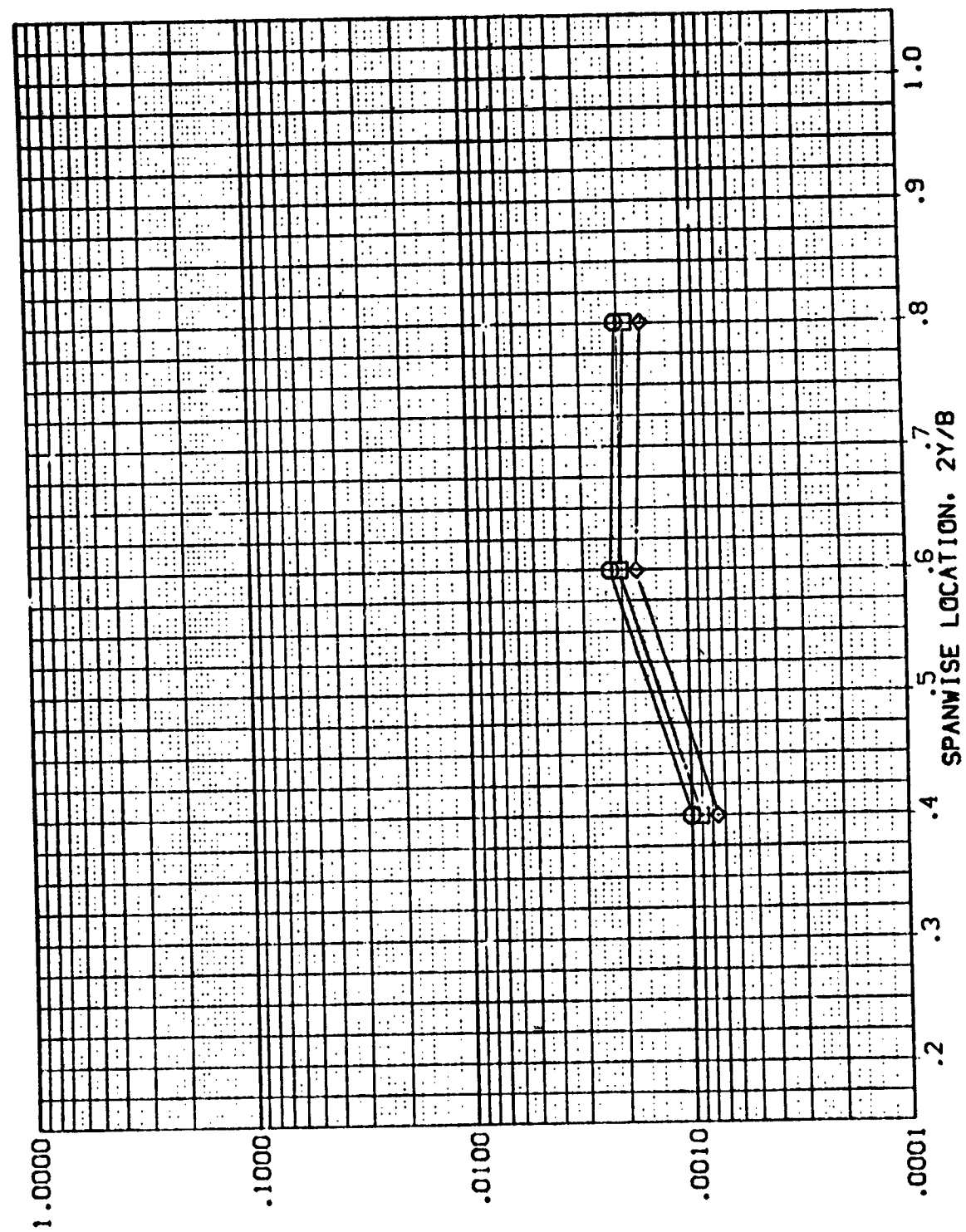


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G02)

SYMBOL	HAU/HT	X/C	MACH	ALPHA	PARAMETRIC VALUES
□	.850	.800	5.219	RN/L	30.000
◇	.900				BETA
	1.000				1.000
					.000

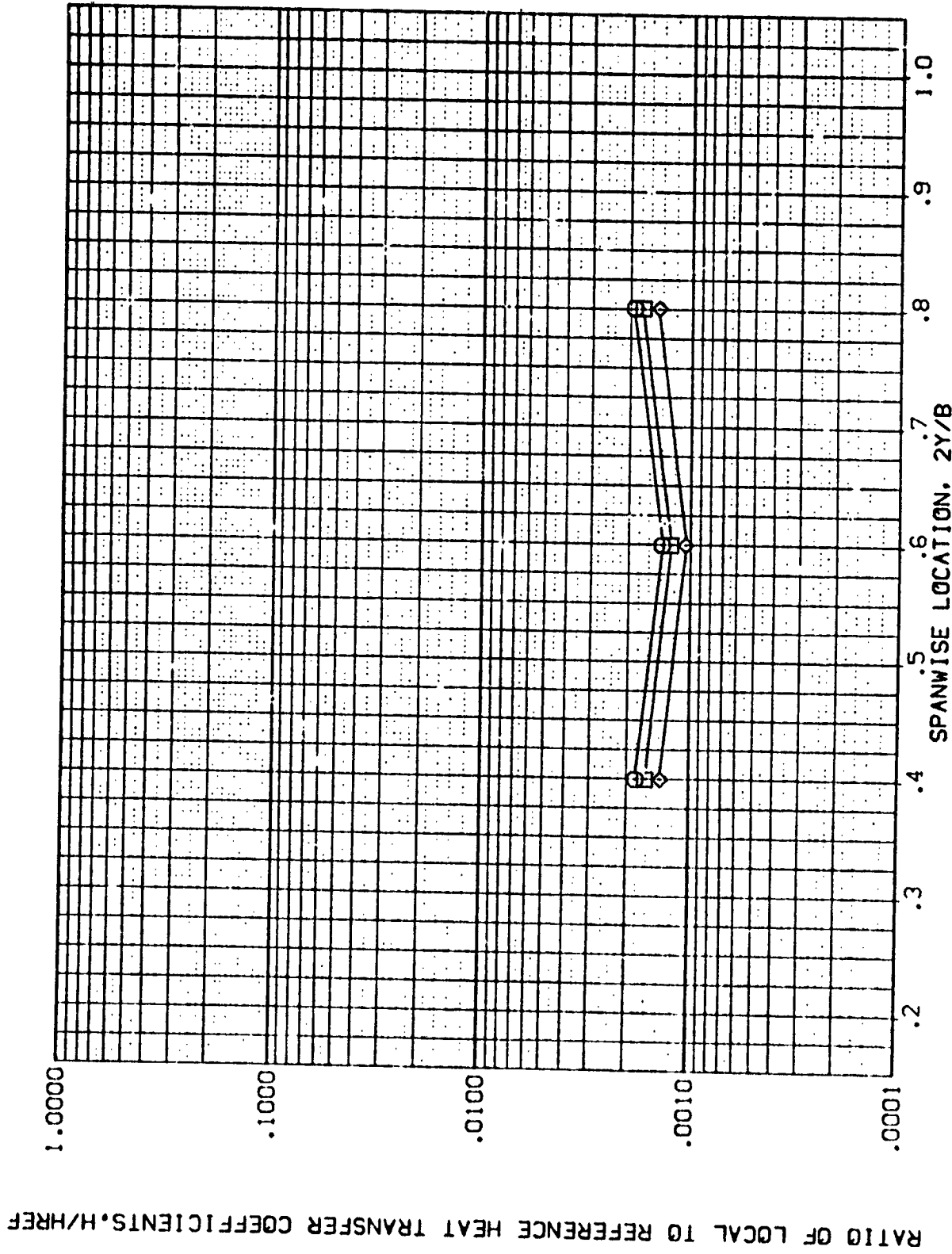


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV603)

SYMBOL MAB/HT X/C MACH
 ◊ .850 .200 5.220
 □ .900
 ◊ 1.000

PARAMETRIC VALUES
 ALPHA 60.0°
 BETA 1.000
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

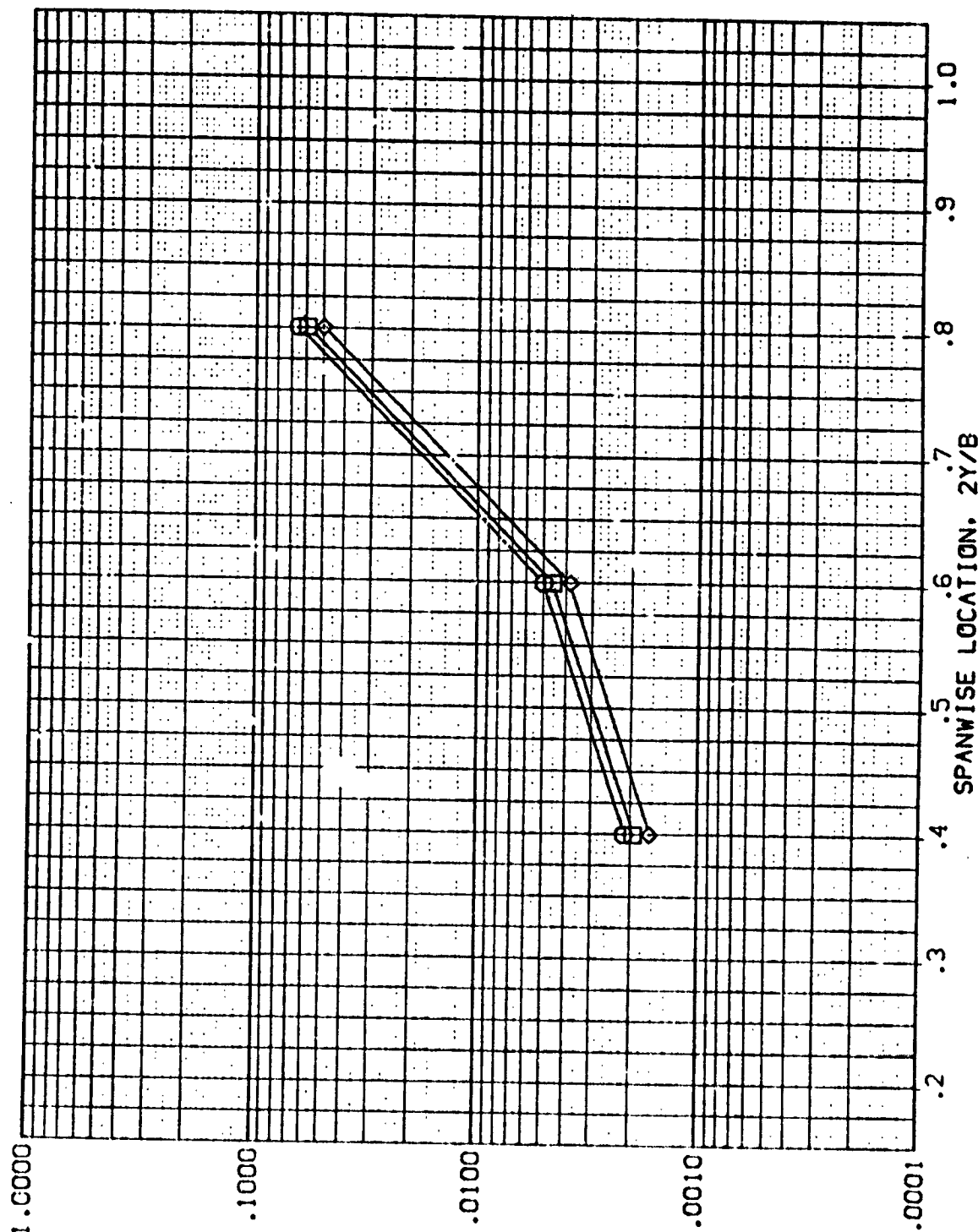


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G03)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
◇	.850	.400	5.220	60.000	.000
□	.900			1.000	
◇	1.000				

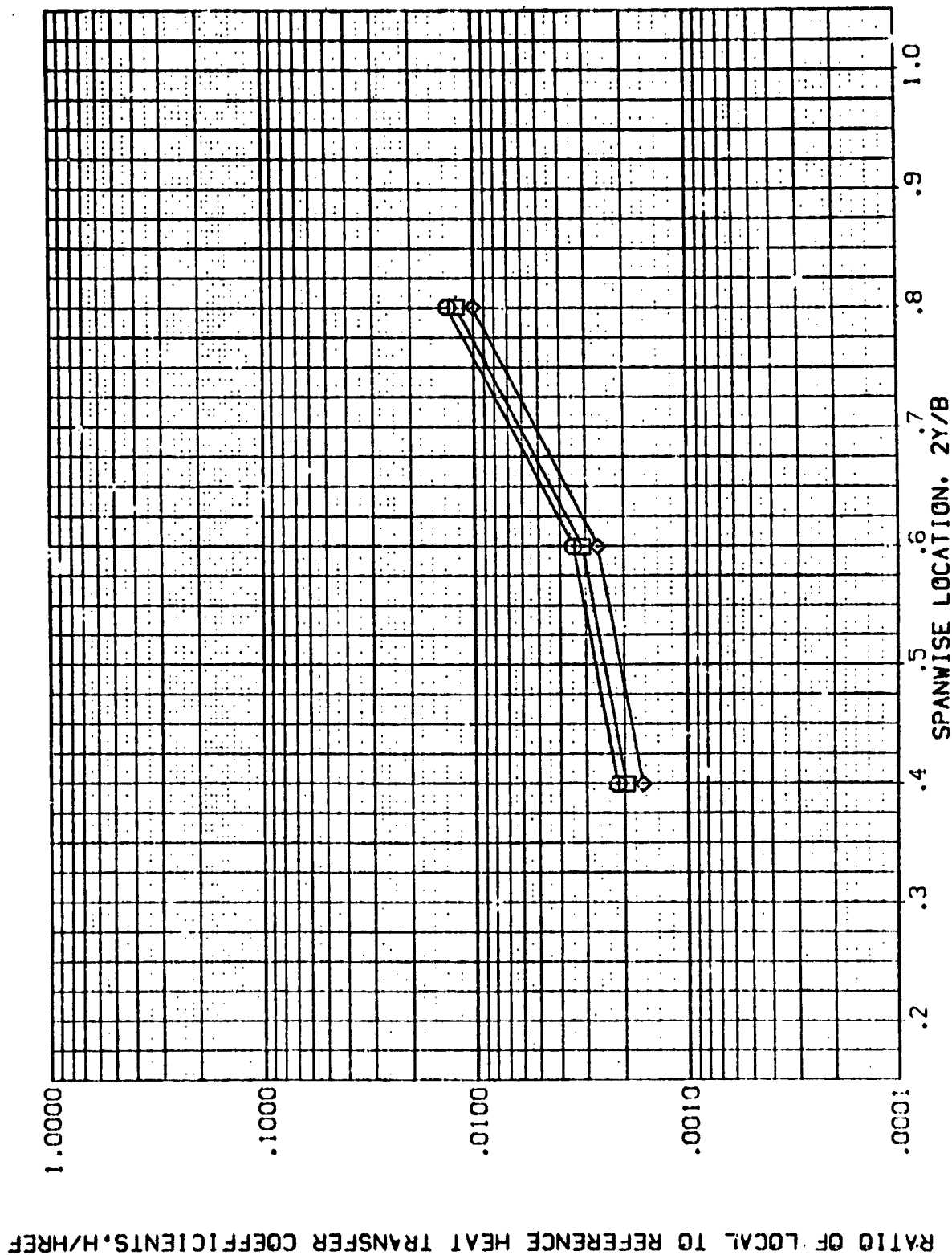


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV603)

SYMBOL HAV/HT X/C MACH
 □ .850 .600 5.220
 ◇ .900
 1.000

PARAMETRIC VALUES
 ALPHA BETA
 RN/L .000
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

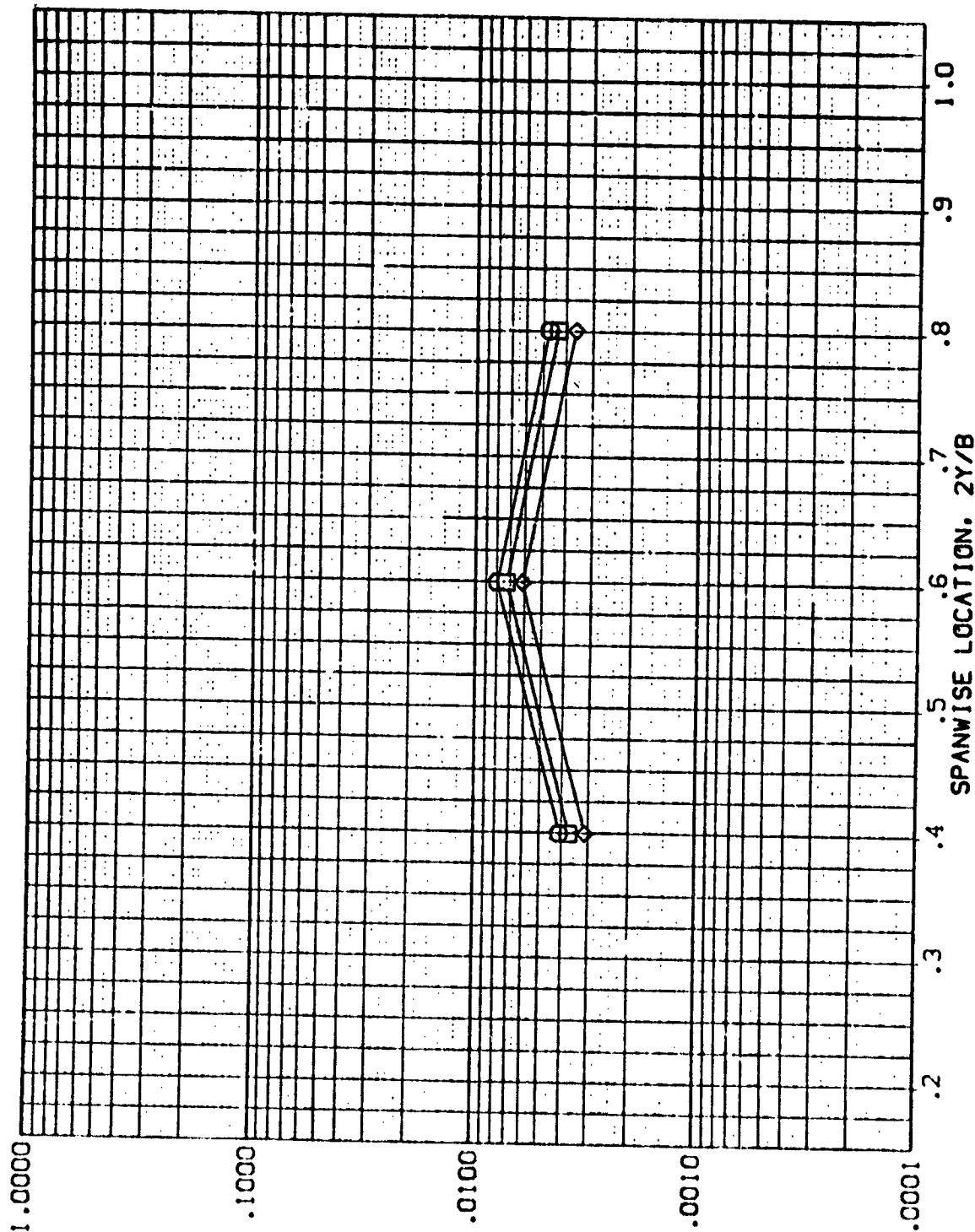


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV603)

PARAMETRIC VALUES	
ALPHA	BETA
60.000	1.000
RN/L	

SYMBOL	MAW/HT	X/C	MACH
□	.850	.800	5.220
□	.900		
◇	1.000		

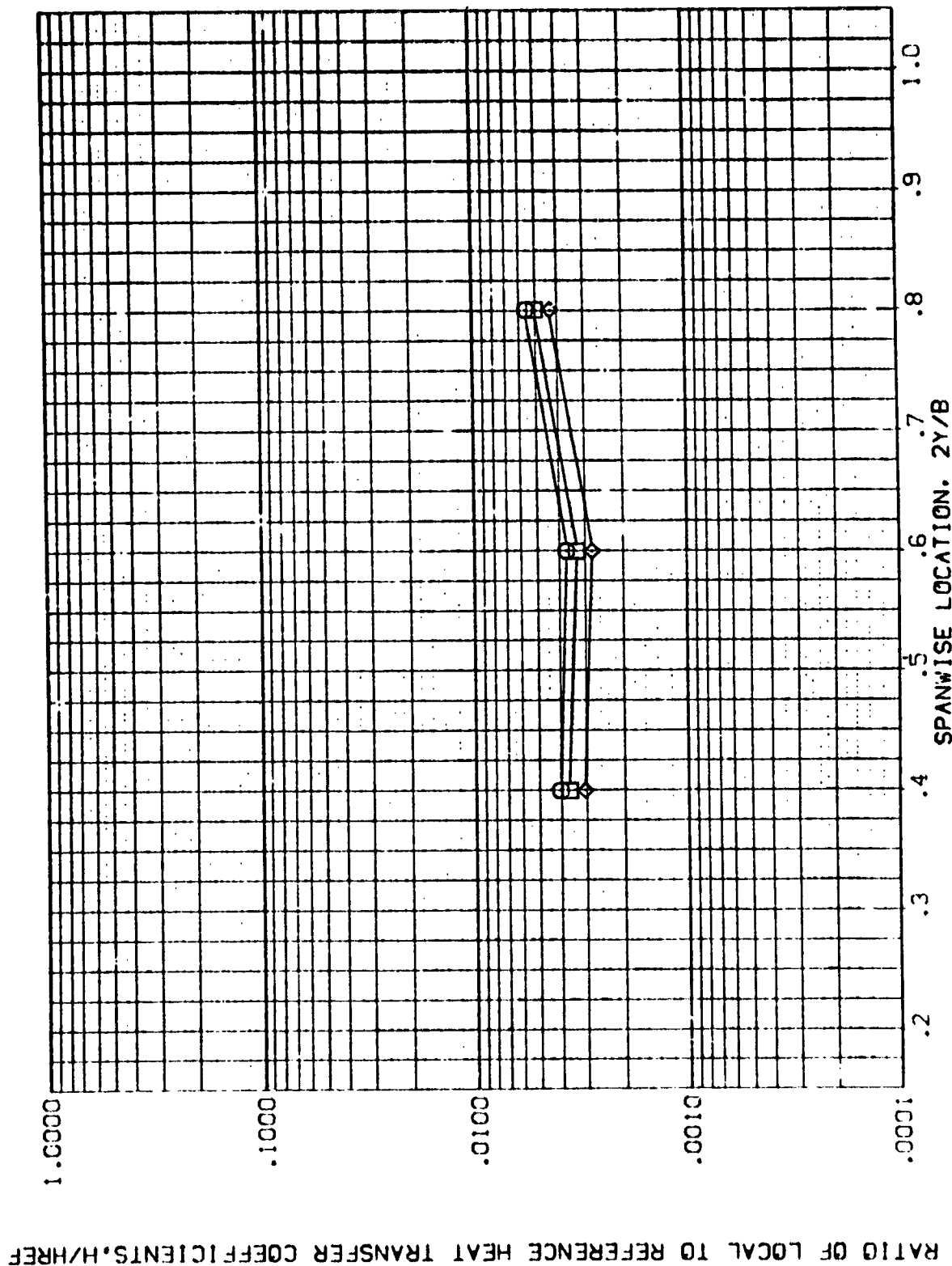


FIG. 23. RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV004)

SYMBOL
 ◇
 □
 ○

MAN/HT .850
 .900
 1.000

X/C .200

MACH 5.219

PARAMETRIC VALUES
 90 .000 BETA
 1.000

ALPHA
 RN/L

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

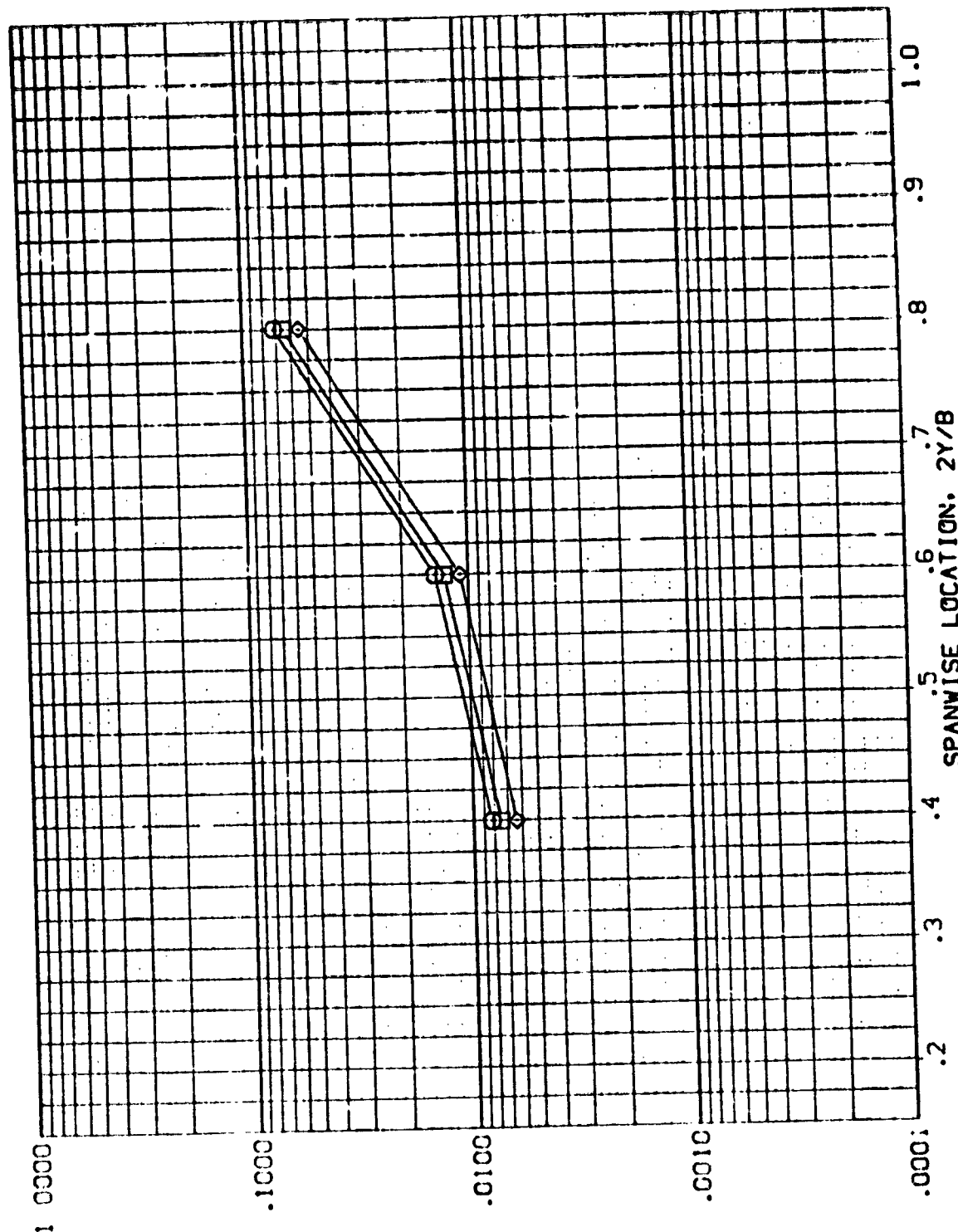


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV004)

SYMBOL	<div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> <div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> <div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></div>	MAW/HT	X/C	MACH	PARAMETRIC VALUES	
		.850	.400	5.219	90.C 3	BETA
		.900			1.000	
		1.000				
					ALPHA	
					RN/L	

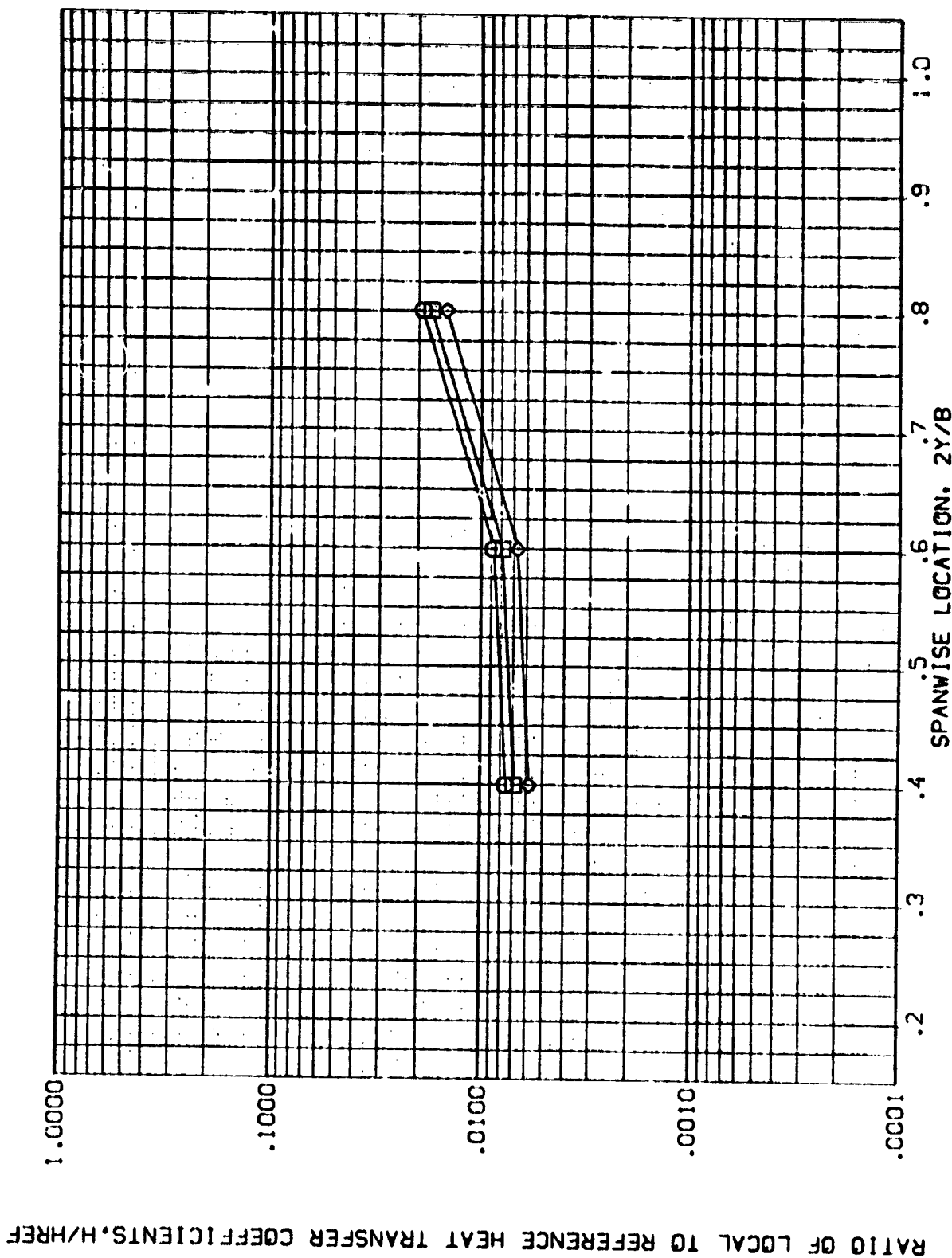


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV604)

SYMBOL HAW/HT X/C MACH
 .650 .600 5.219
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 90.000 BETA .000
 RV/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

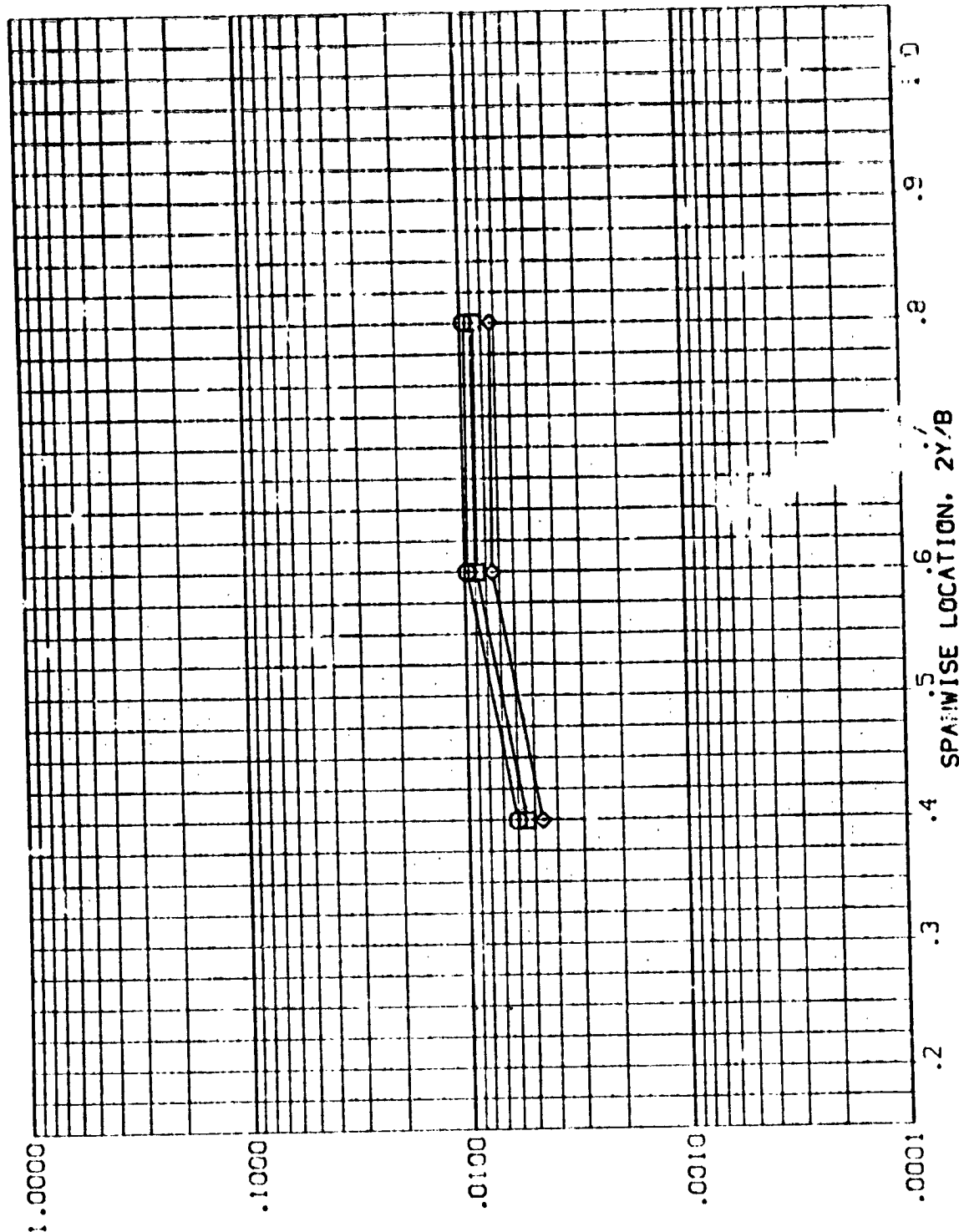


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRE-ICE C. TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV004)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				90.000	BETA
◇	.850	.800	5.219	1.000	.000
□	.900				
◇	1.000				

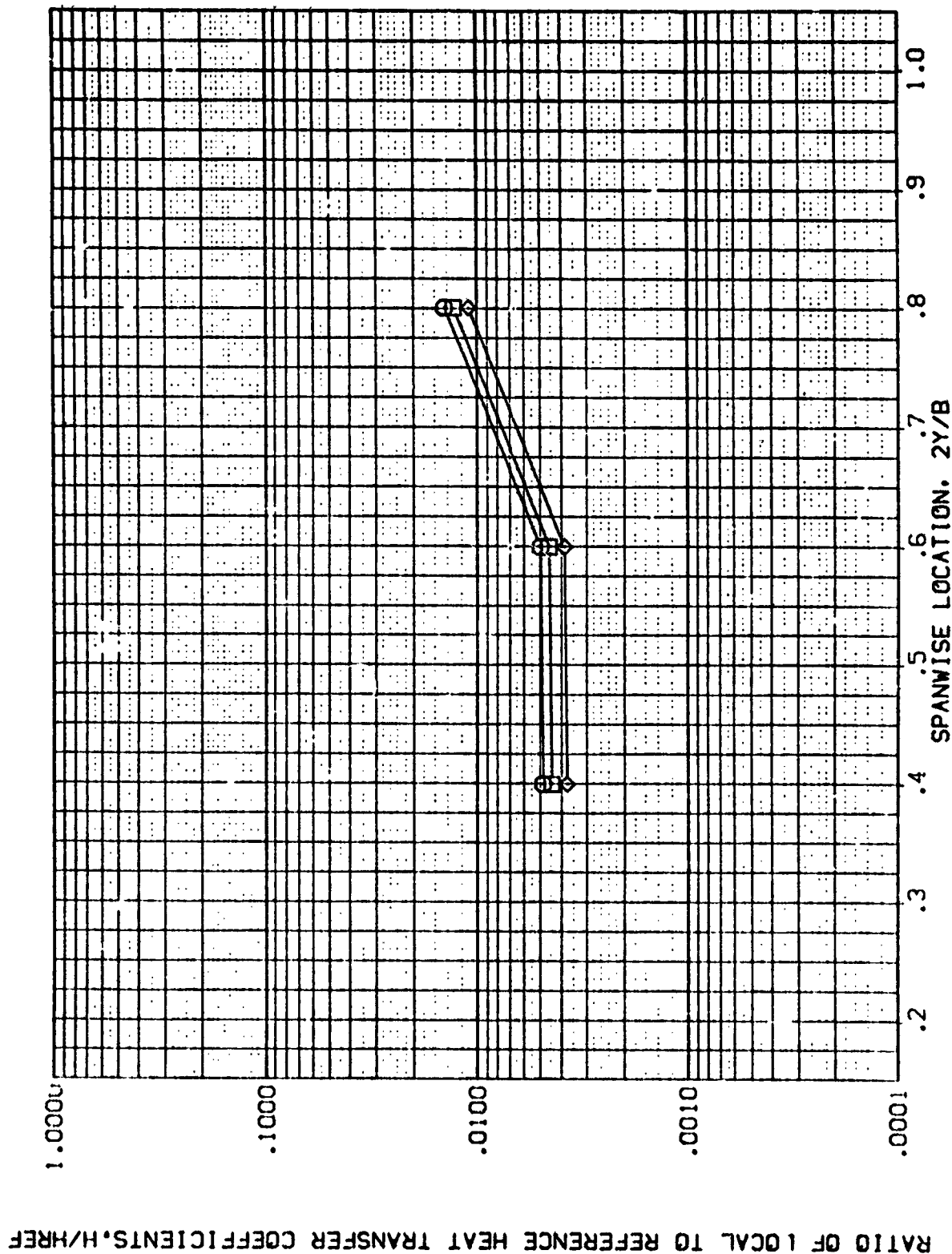


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV005)

SYMBOL
 ○
 □
 ◇

HAW/HT X/C MACH
 .850 .200 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

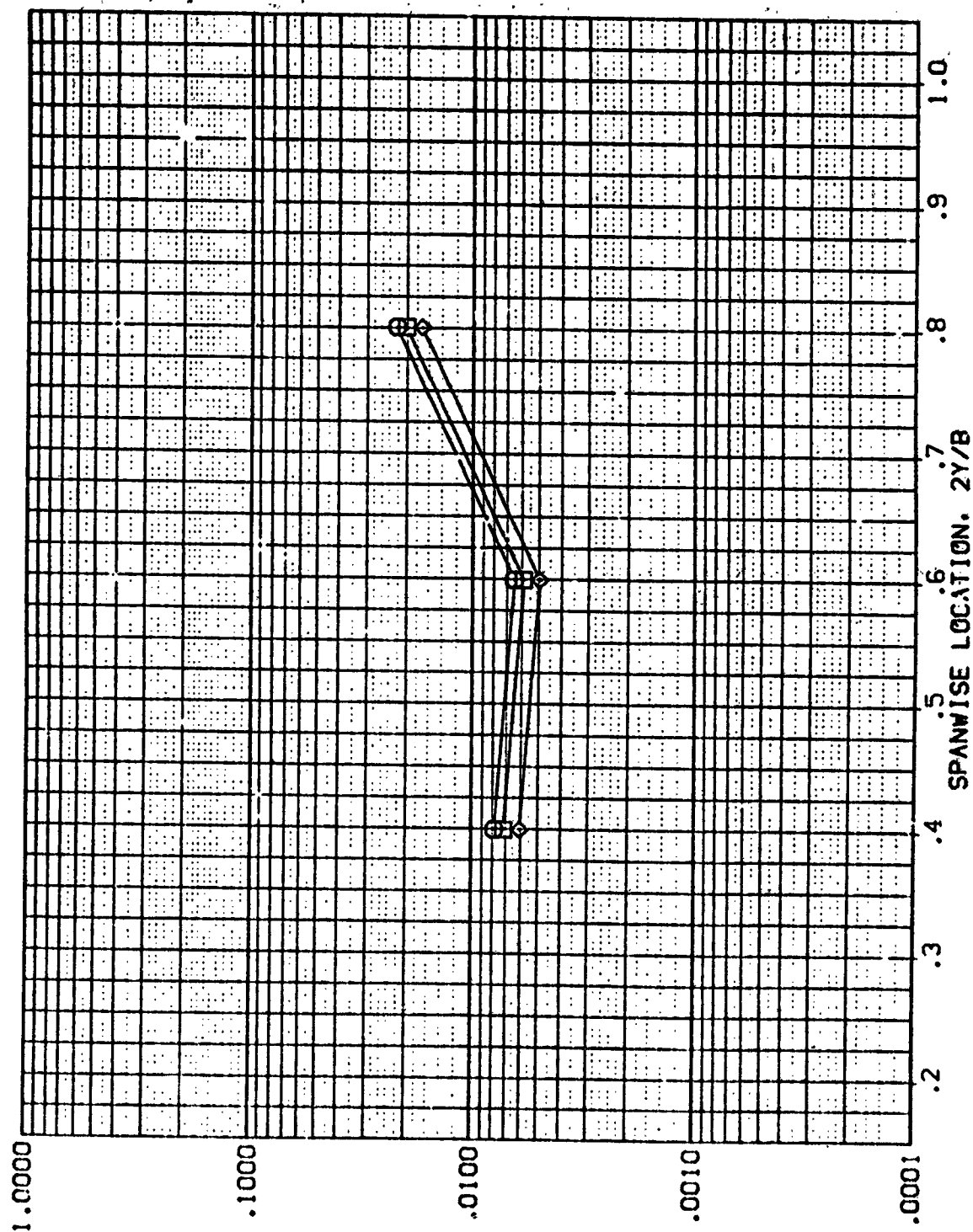


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV005)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
◇	.850	.400	5.220	120.000	.000
□	.900			1.000	
◇	1.000				

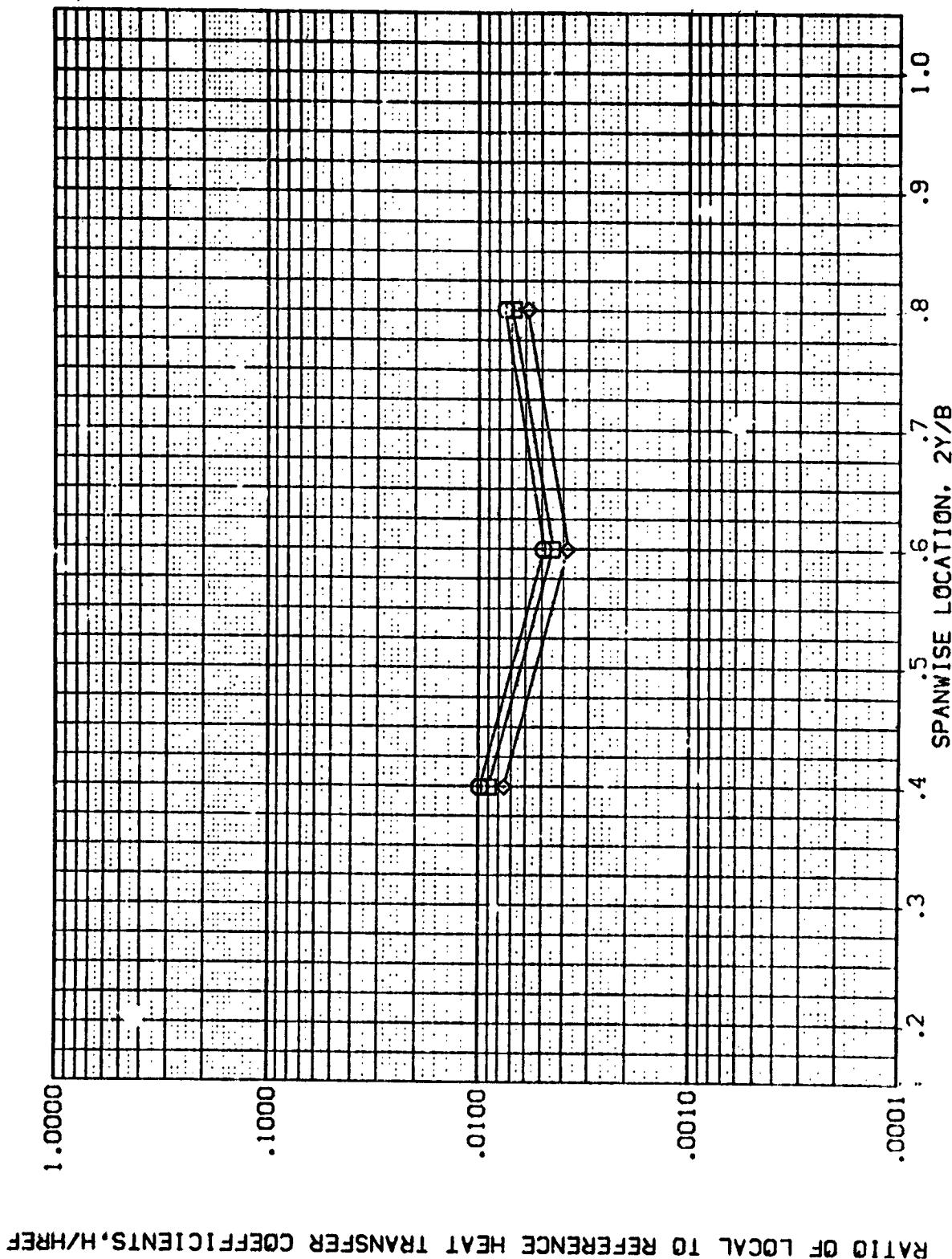


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G05)

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L 1.000

SYMBOL MACH X/C
 .850 .600
 .900
 1.000

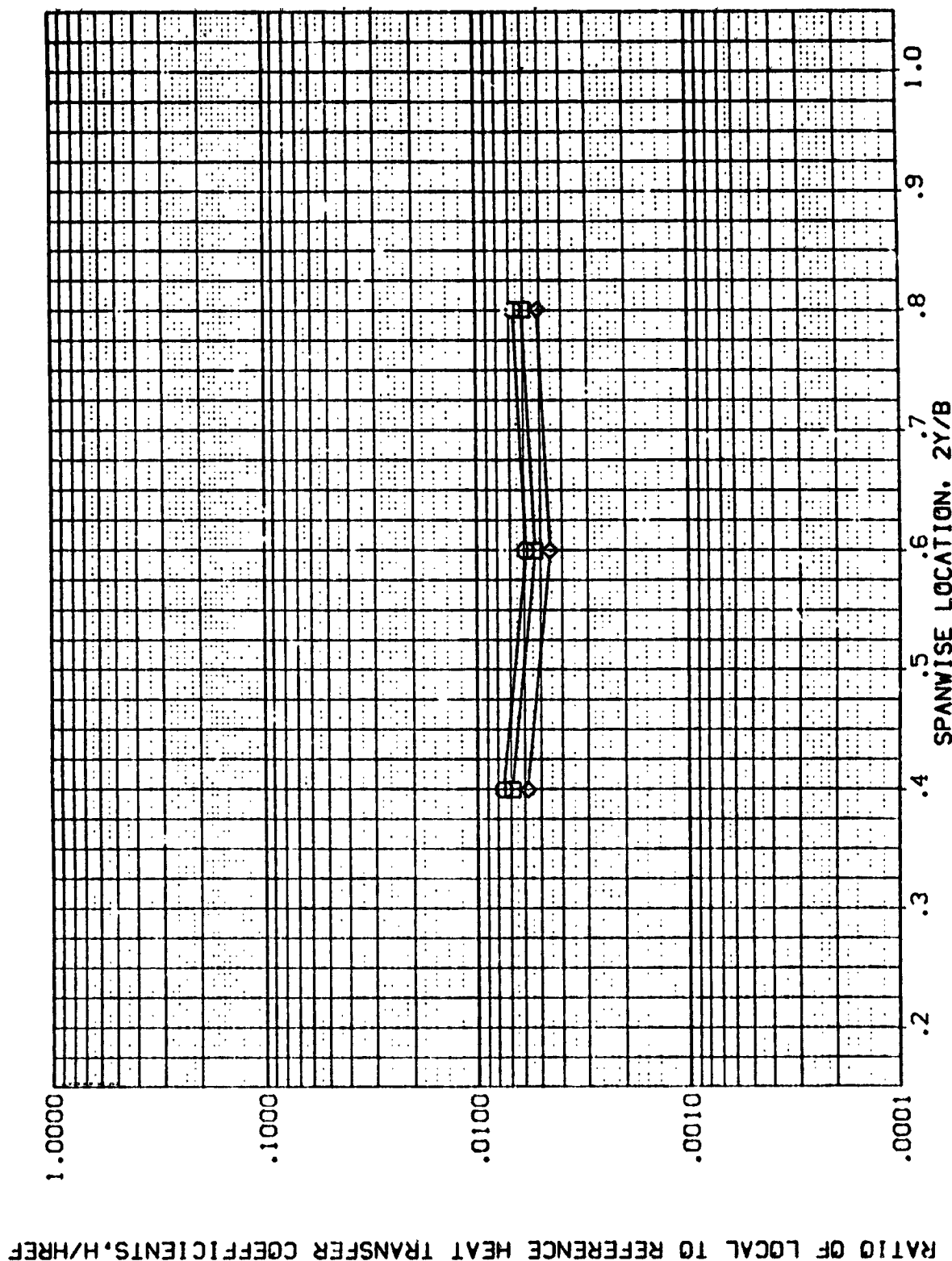


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G05)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.800	5.220	ALPHA 120.000 BETA .000
□	.900			RV/L 1.000
	1.000			

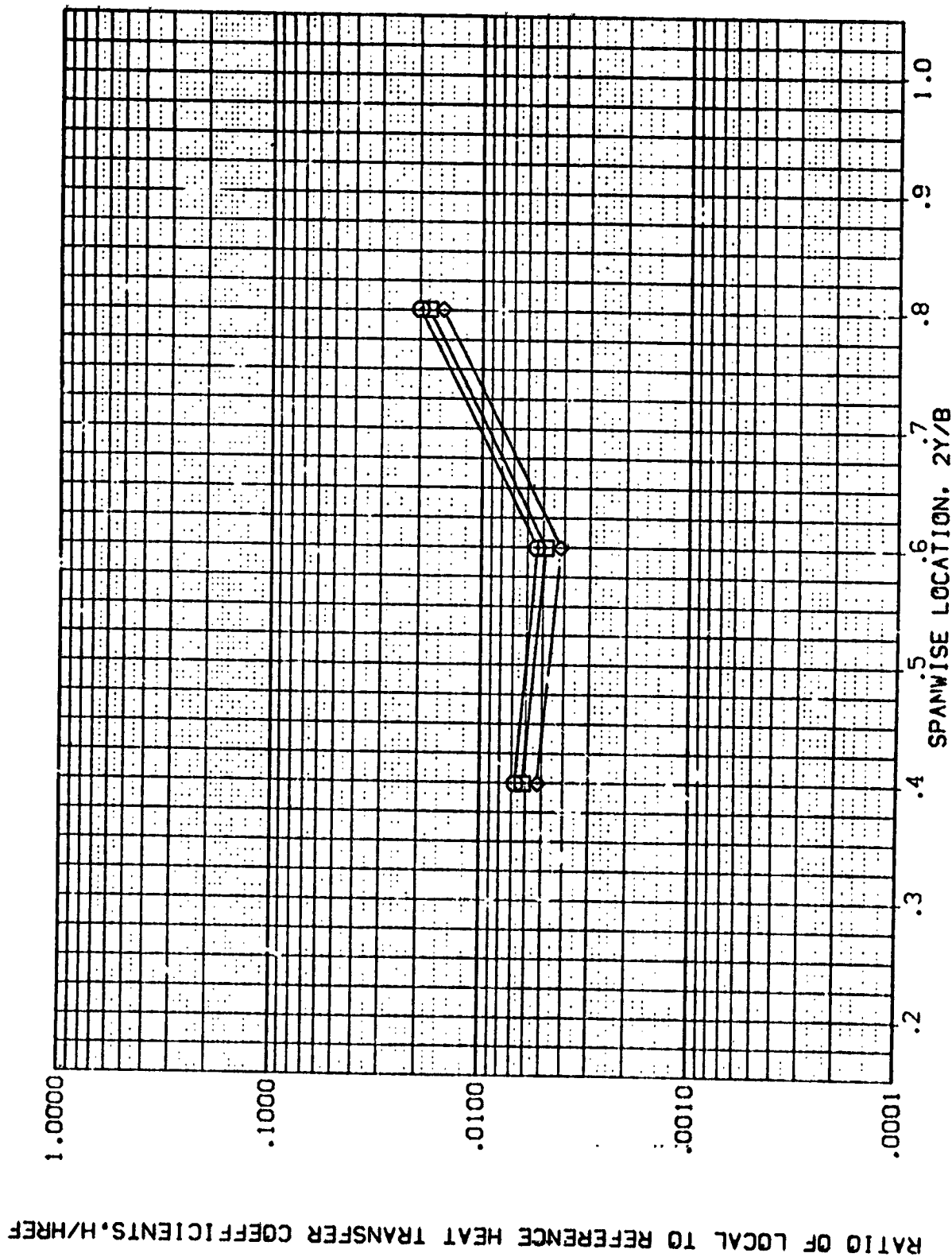


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE (REV G06)

SYMBOL	HAU/HT	X/C	MACH	PARAMETRIC VALUES
◇	.853	.200	5.220	ALPHA
□	.900			RN/L
	1.000			BETA
				.000

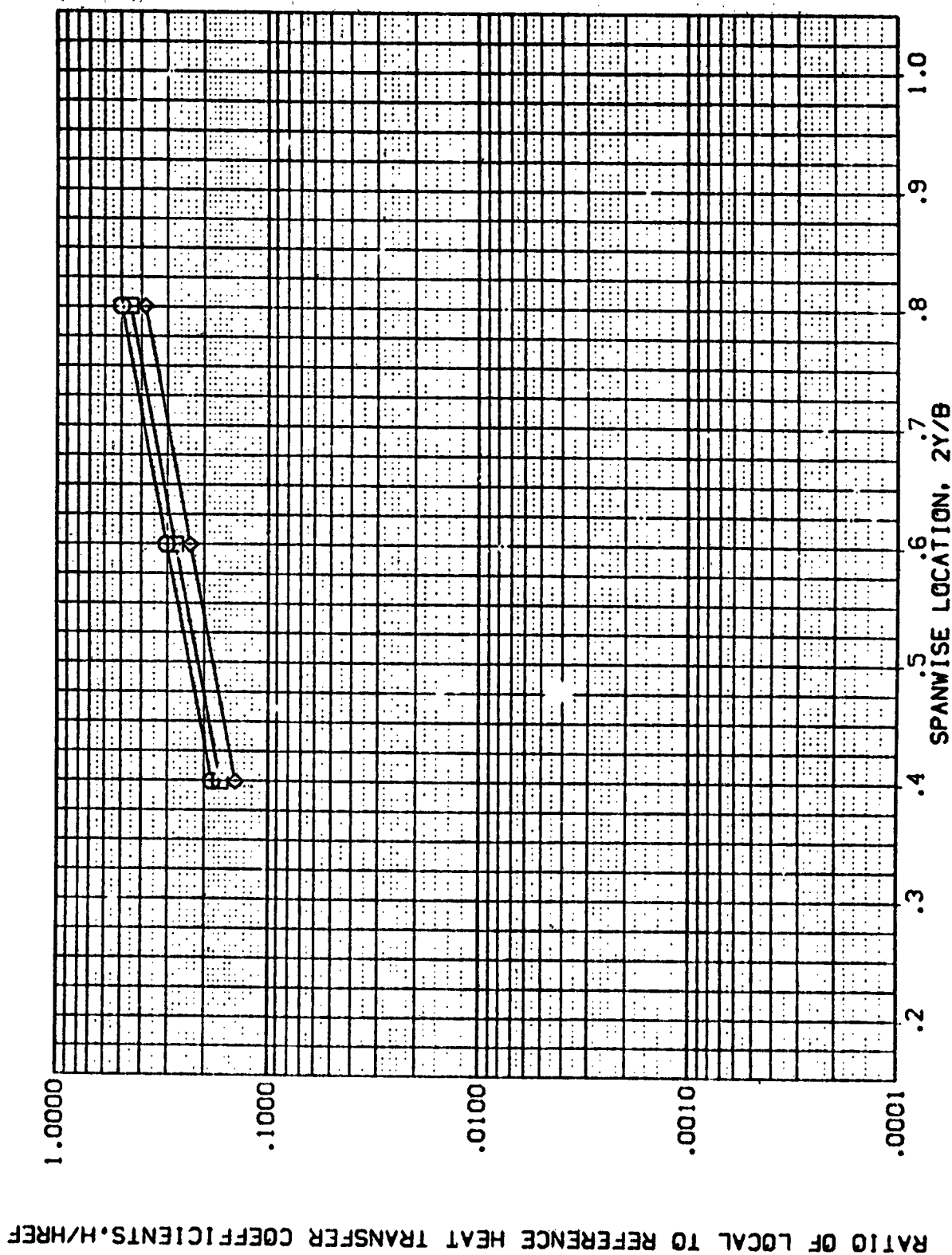


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV606)

SYMBOL	<div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> <div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px; border-radius: 50%;"></div> <div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px; border-radius: 50%; transform: rotate(45deg);"></div> <div style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px; border-radius: 50%; transform: rotate(90deg);"></div>	HAIR/HT	X/C	MACH	PARAMETRIC VALUES		
		.850	.400	5.220	ALPHA	-120.C..J	BETA
		.900			RN/L	1.000	
		1.000					.000

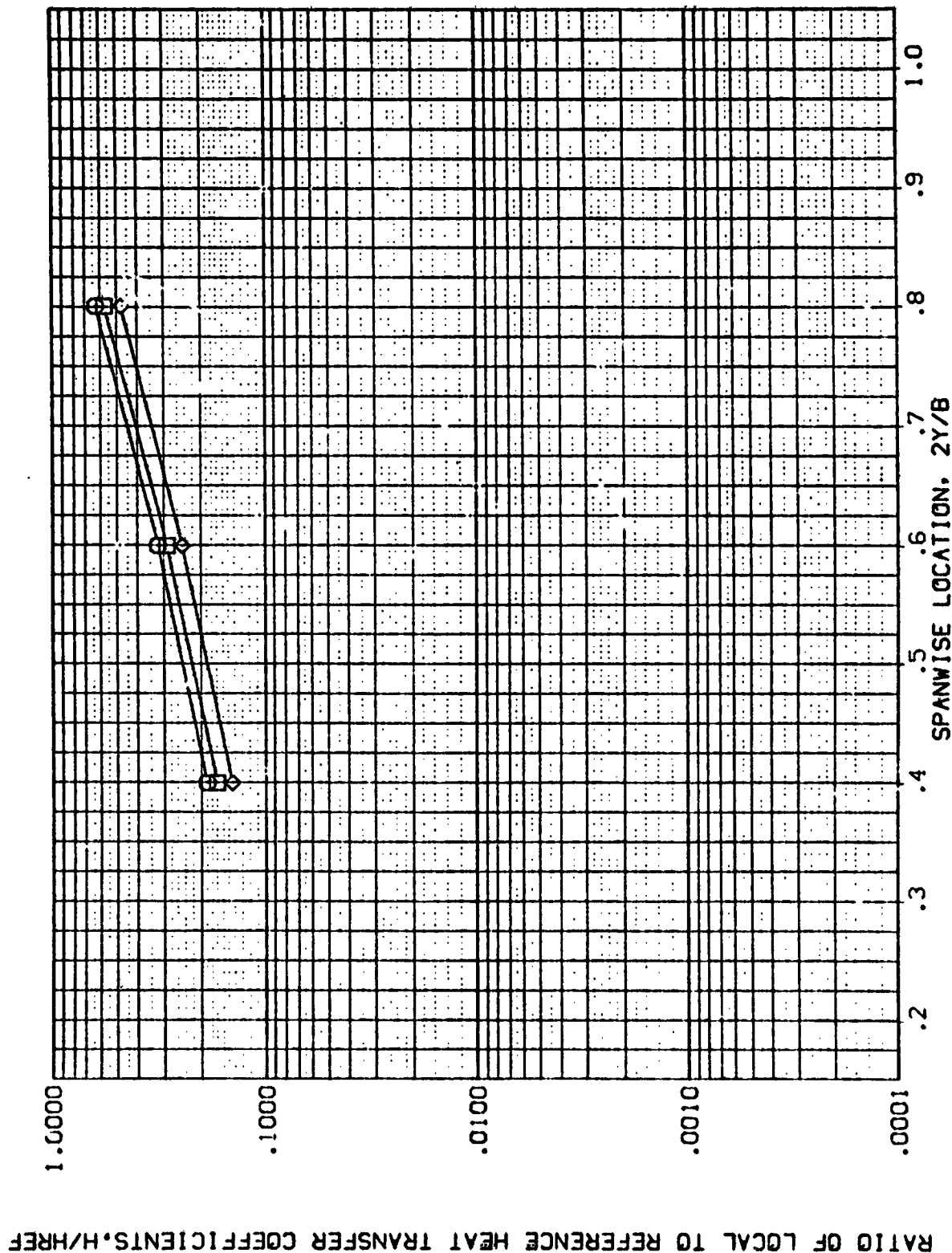


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TAIL

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G06)

SYMBOL	MAV/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.600	5.220	ALPHA
□	.900			RN/L
◇	1.000			BETA
				.000

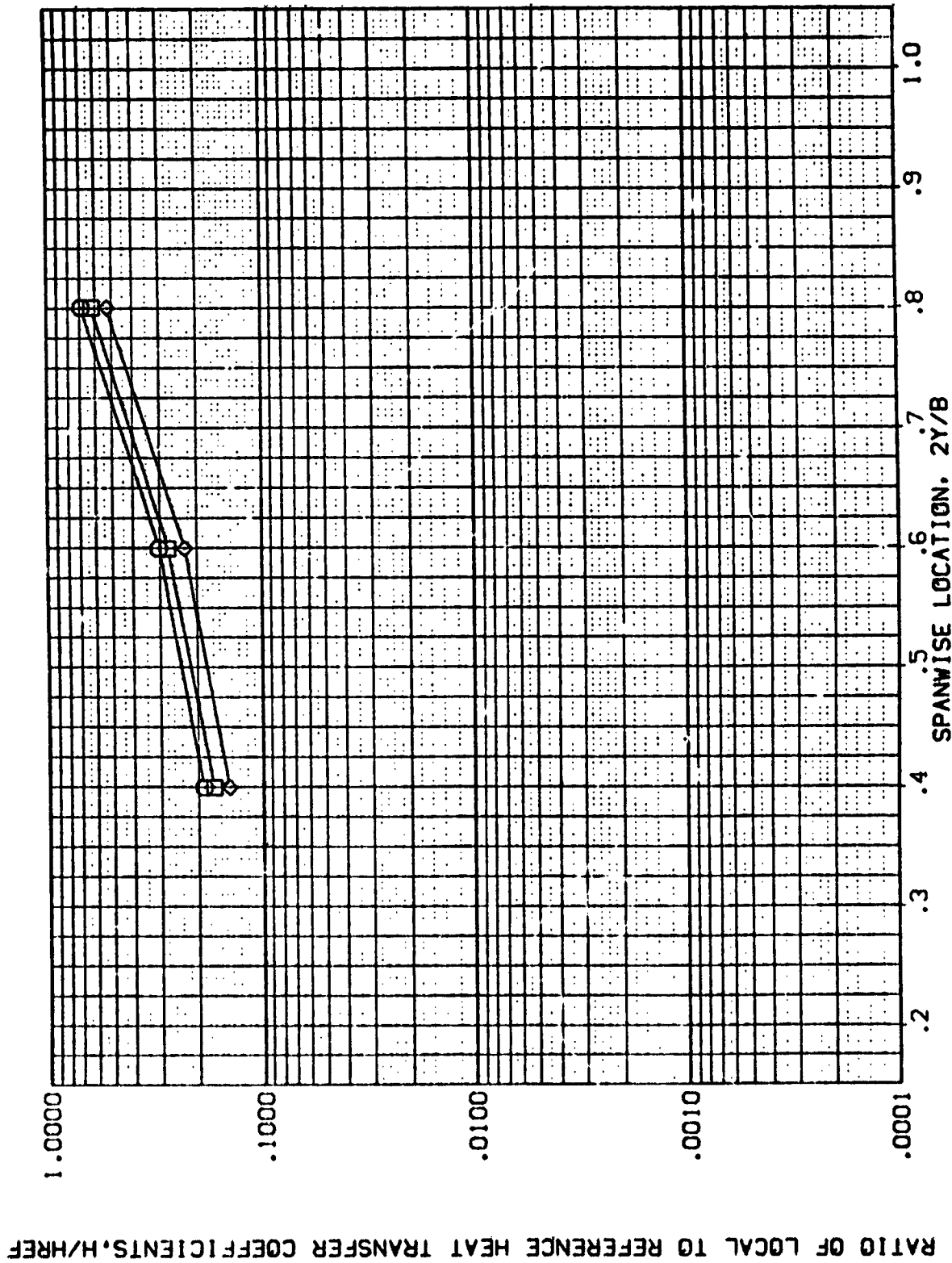


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

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AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV06)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA 1.000
◇	.850	.800	5.220	-120.000	.000
□	.900				
◇	1.000				

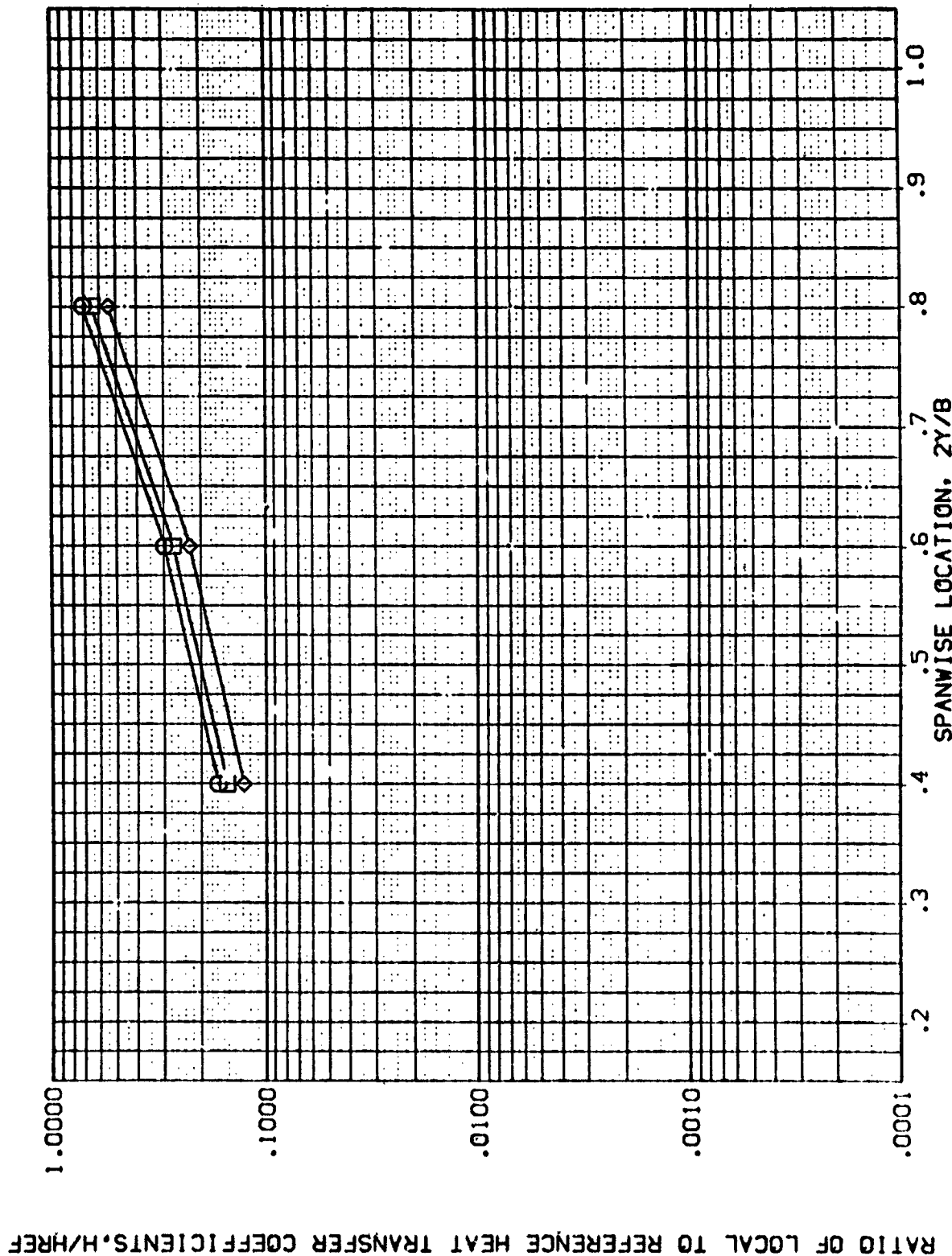


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV007)

SYMBOL	MAW/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.200	5.219	-90.0°
□	.900			BETA
	1.000			1.000
				.000

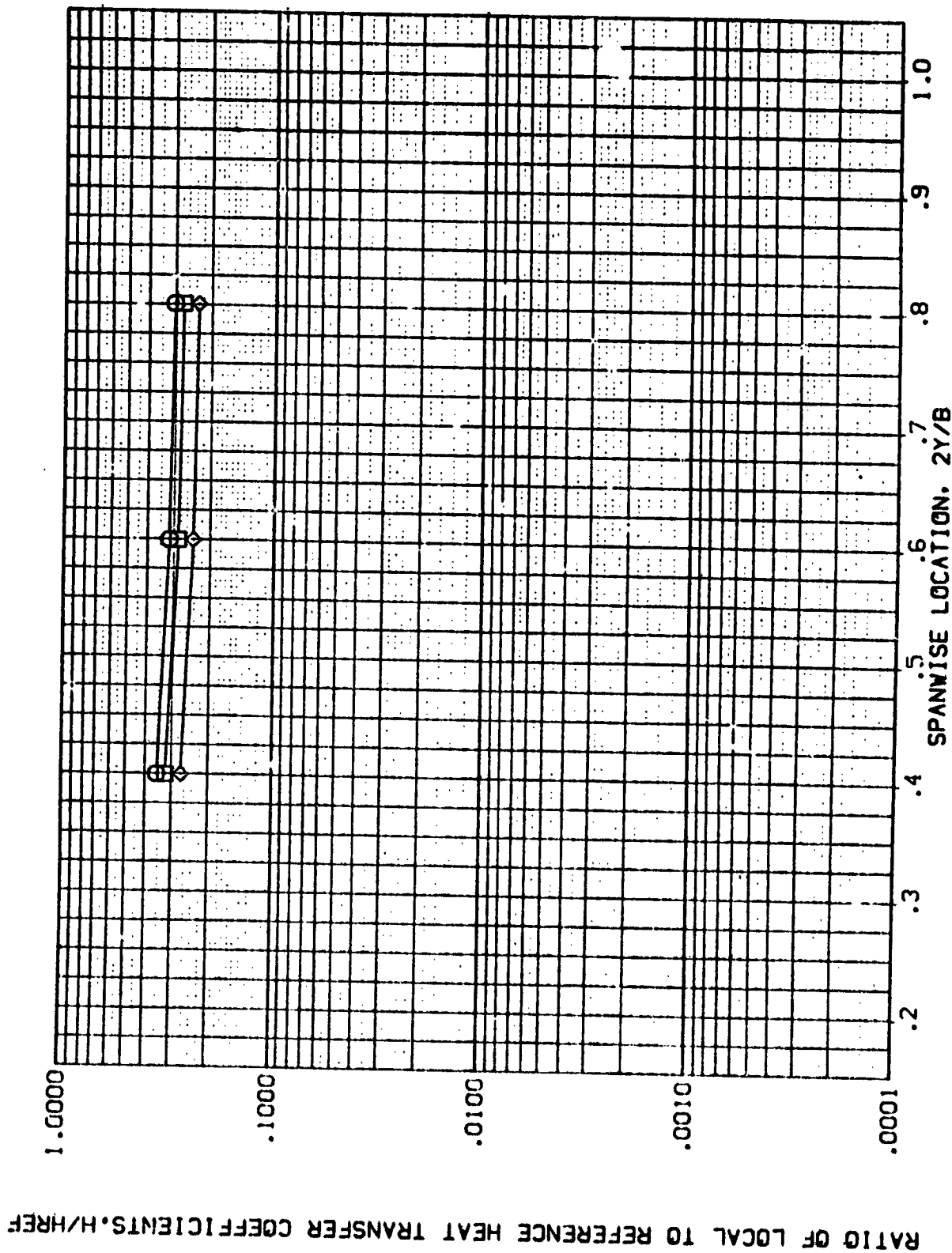


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TAIL

AMES 3.5-195 IH28 01+11 WING UPPER SURFACE (REV607)

PARAMETRIC VALUES
 -50.000 BETA
 1.000

ALPHA
 RN/L

SYMBOL
 HAW/HT X/C MACH
 .85C .400 5.219
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

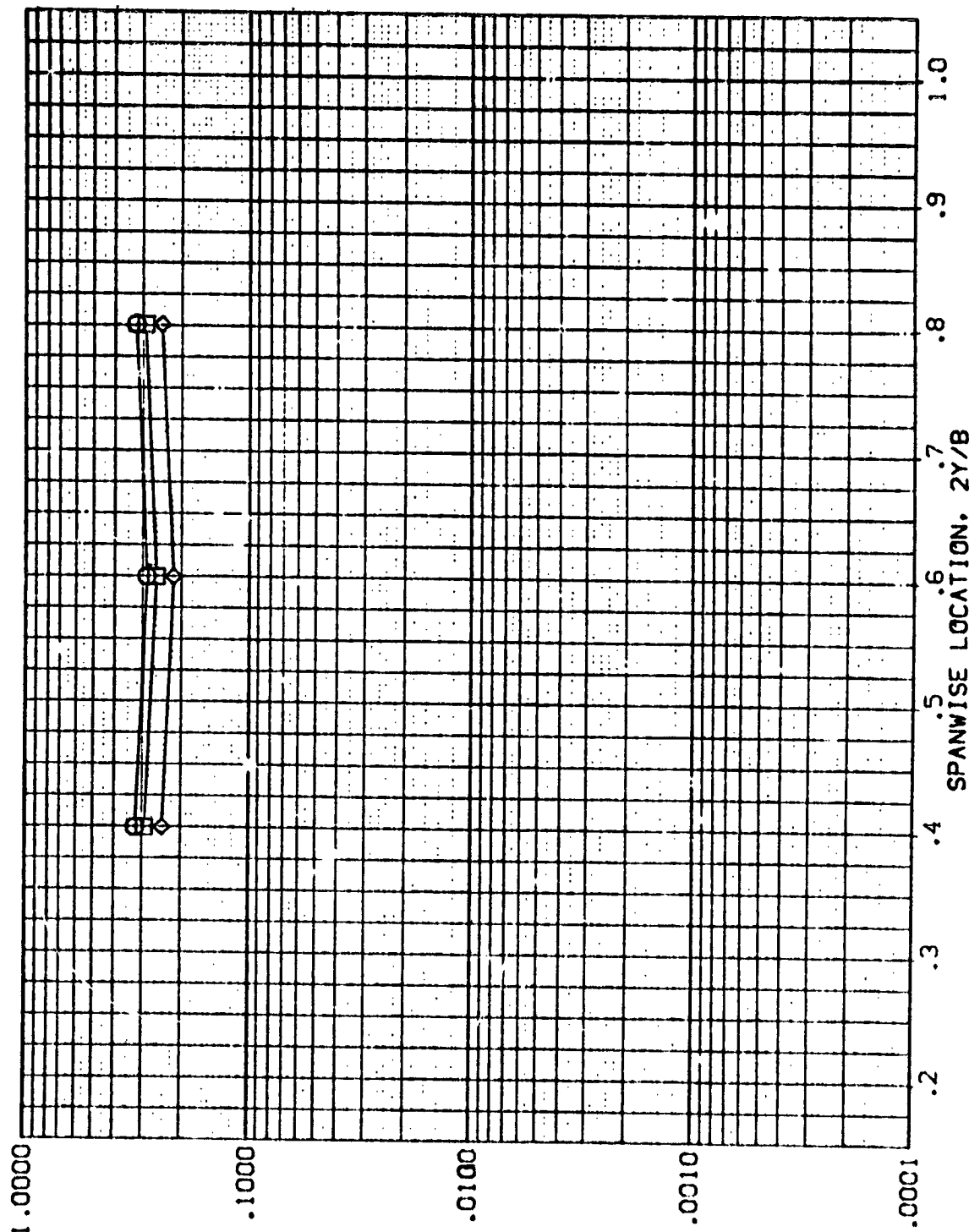


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV607)

SYMBOL	MAW/HT	X/C	MACH	ALPHA	PARAMETRIC VALUES
□	.850	.600	5.219	PN/L	-90.0°0 BETA
◇	.900				1.000 .000

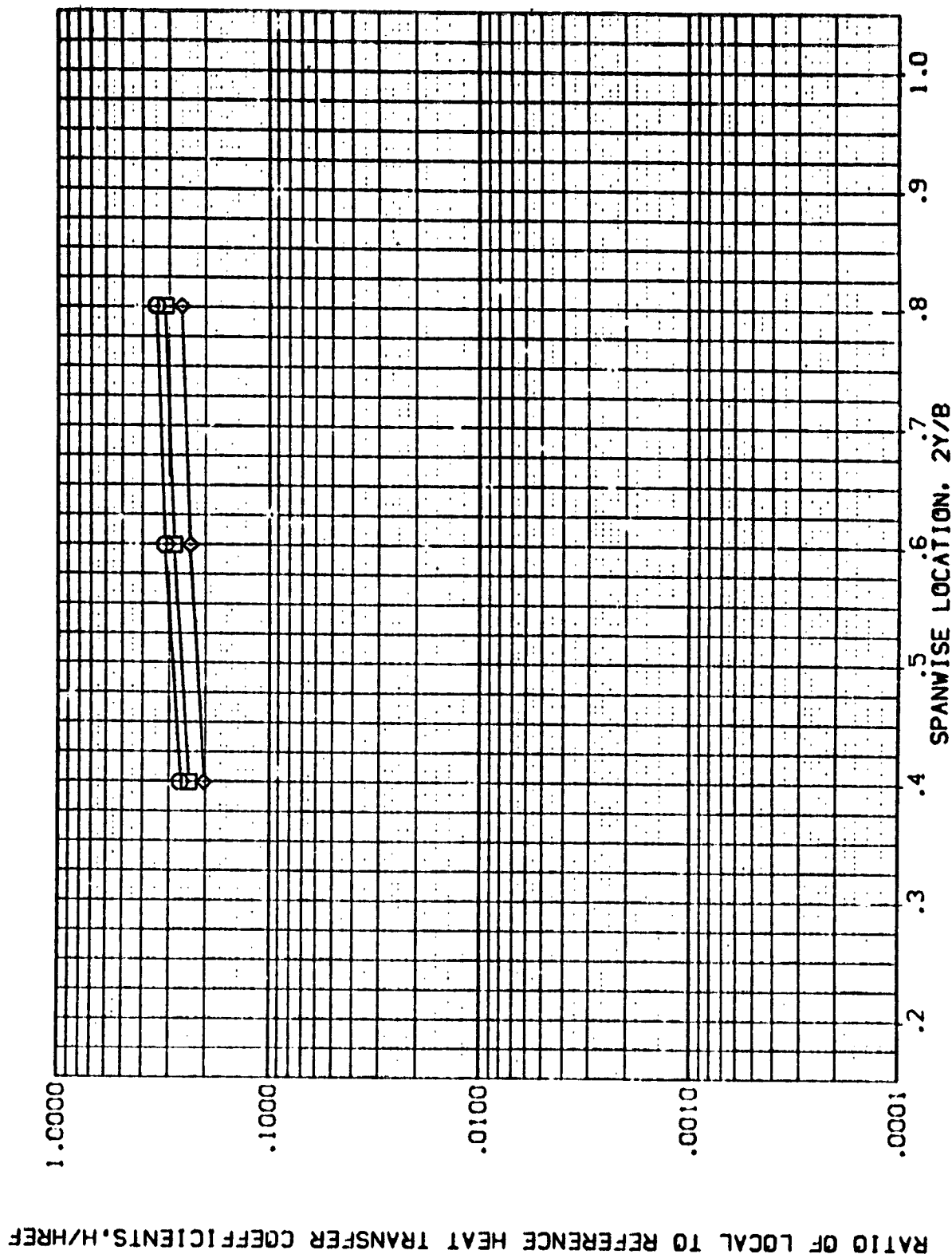


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 31+T1 WING UPPER SURFACE (REVG07)

SYMBOL HAW/HT X/C MACH PARAMETRIC VALUES ALPHA BETA .000

 .850 .800 5.219 -90.000 1.000

 .900 1.000

 1.000

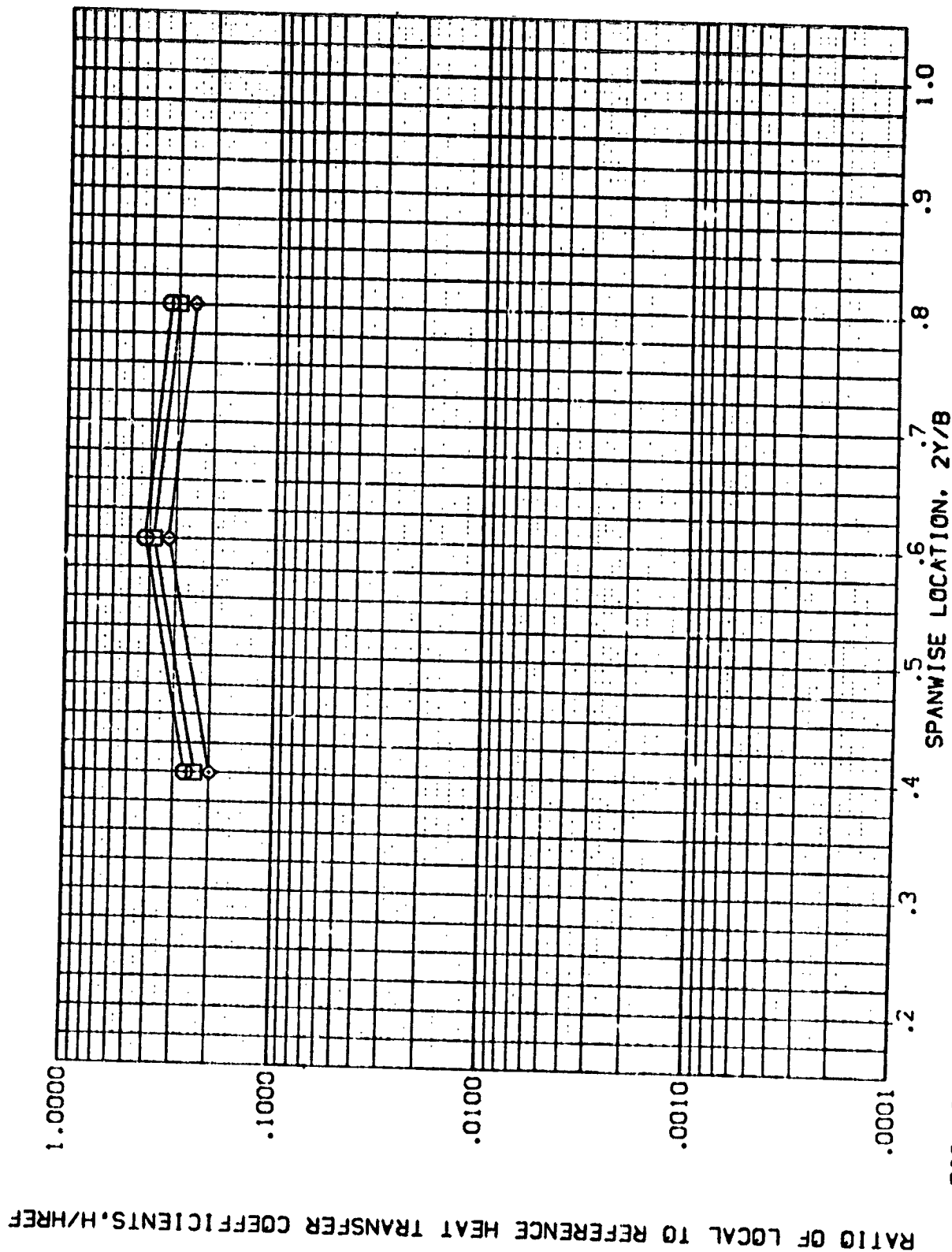


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV G08)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

SYMBOL
 ◇
 □
 ○

MAV/HT X/C MACH
 .850 .200 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -60.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

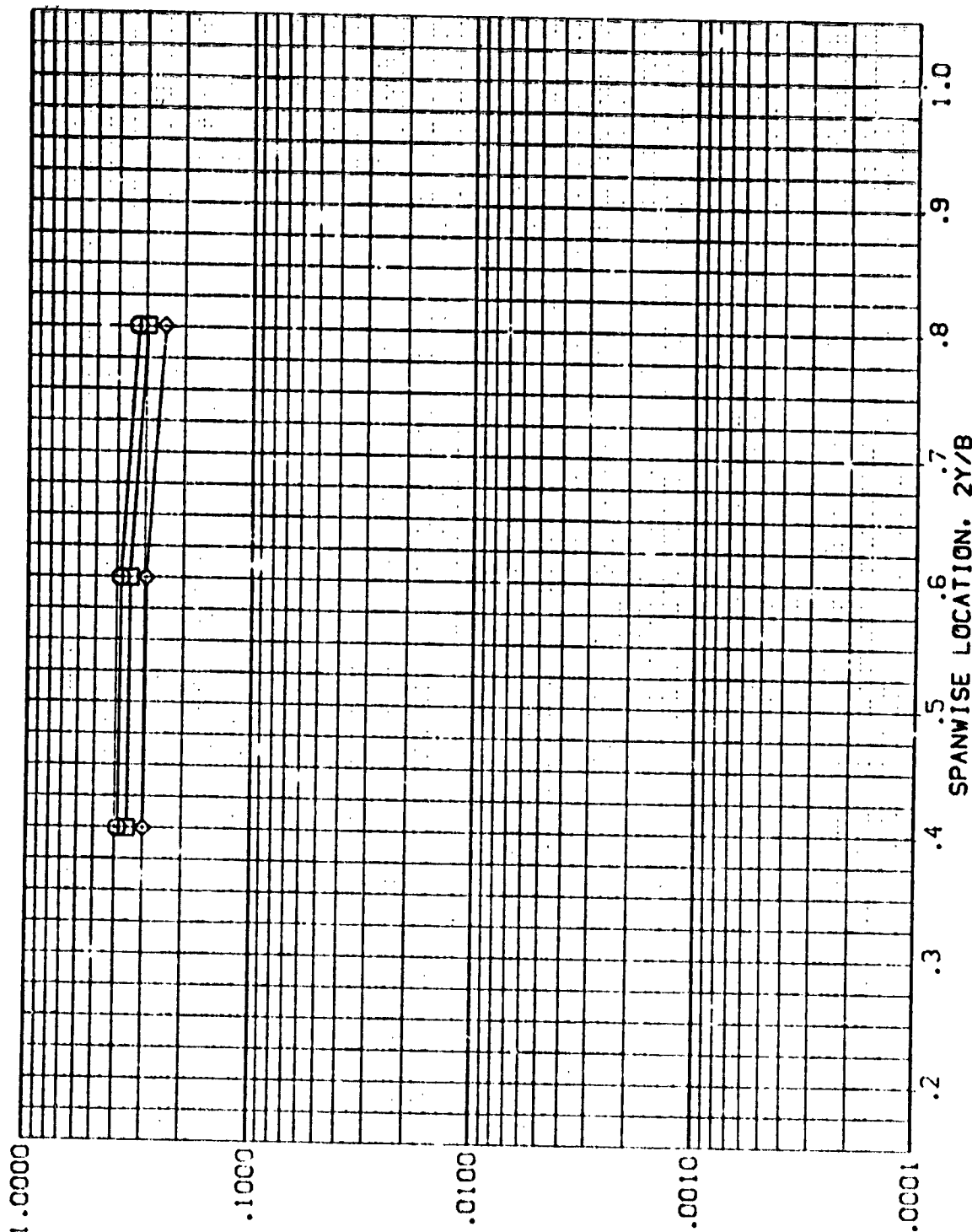


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG08)

SYMBOL	HAY/HT	X/C	MACH	PARAMETRIC VALUES	
				-60.070	BETA
◇	.850	.400	5.220	1.000	.000
□	.900				
◇	1.000				

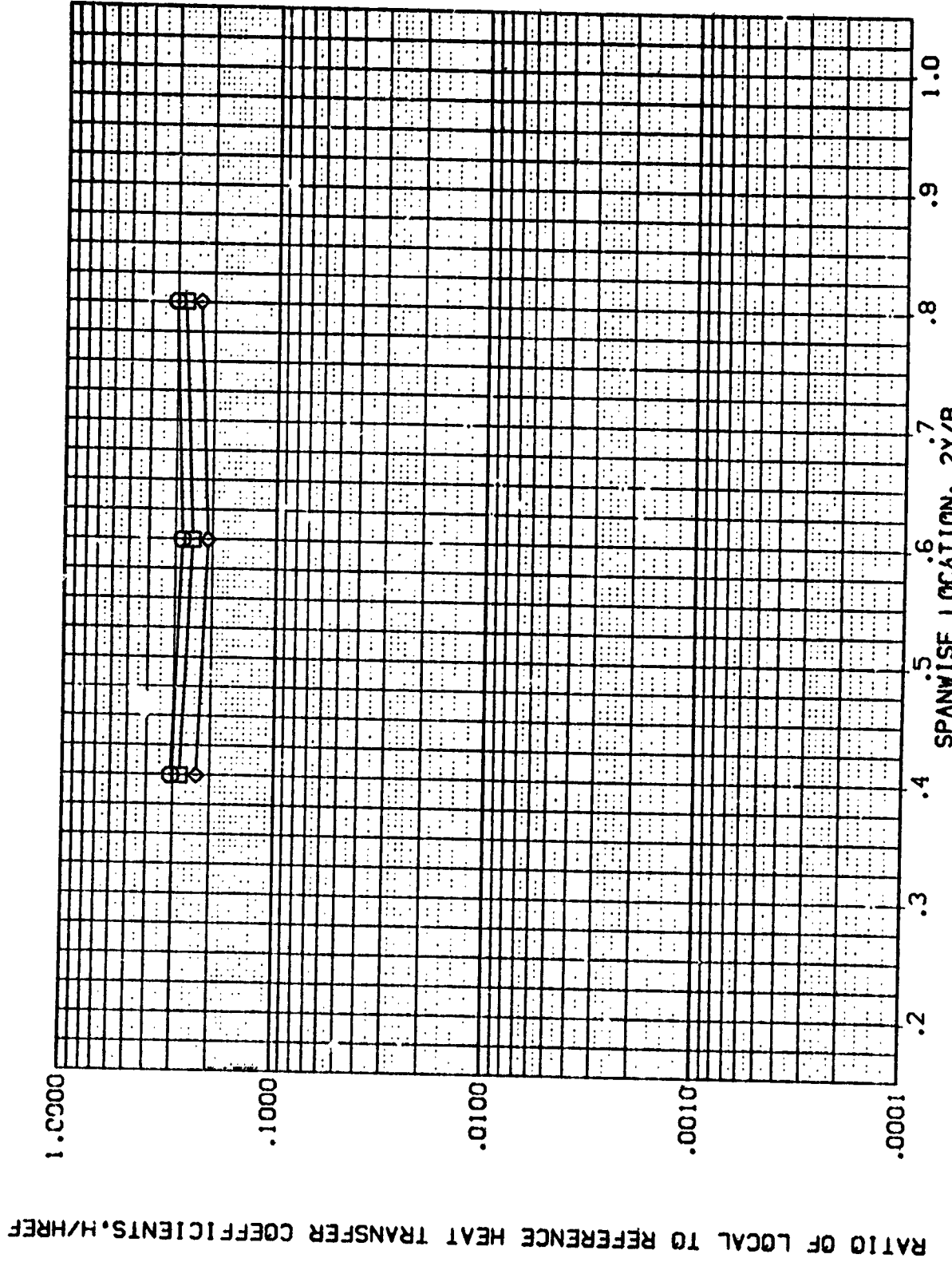


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REV G08)

MAEH

.600

0000.0000
0000.0000

ALPHA
RN/L

.000



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AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV008)

SYMBOL	HAU/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.800	5.228	ALPHA
□	.900			RV/L
	1.000			-60.000
				BETA
				1.000
				.000

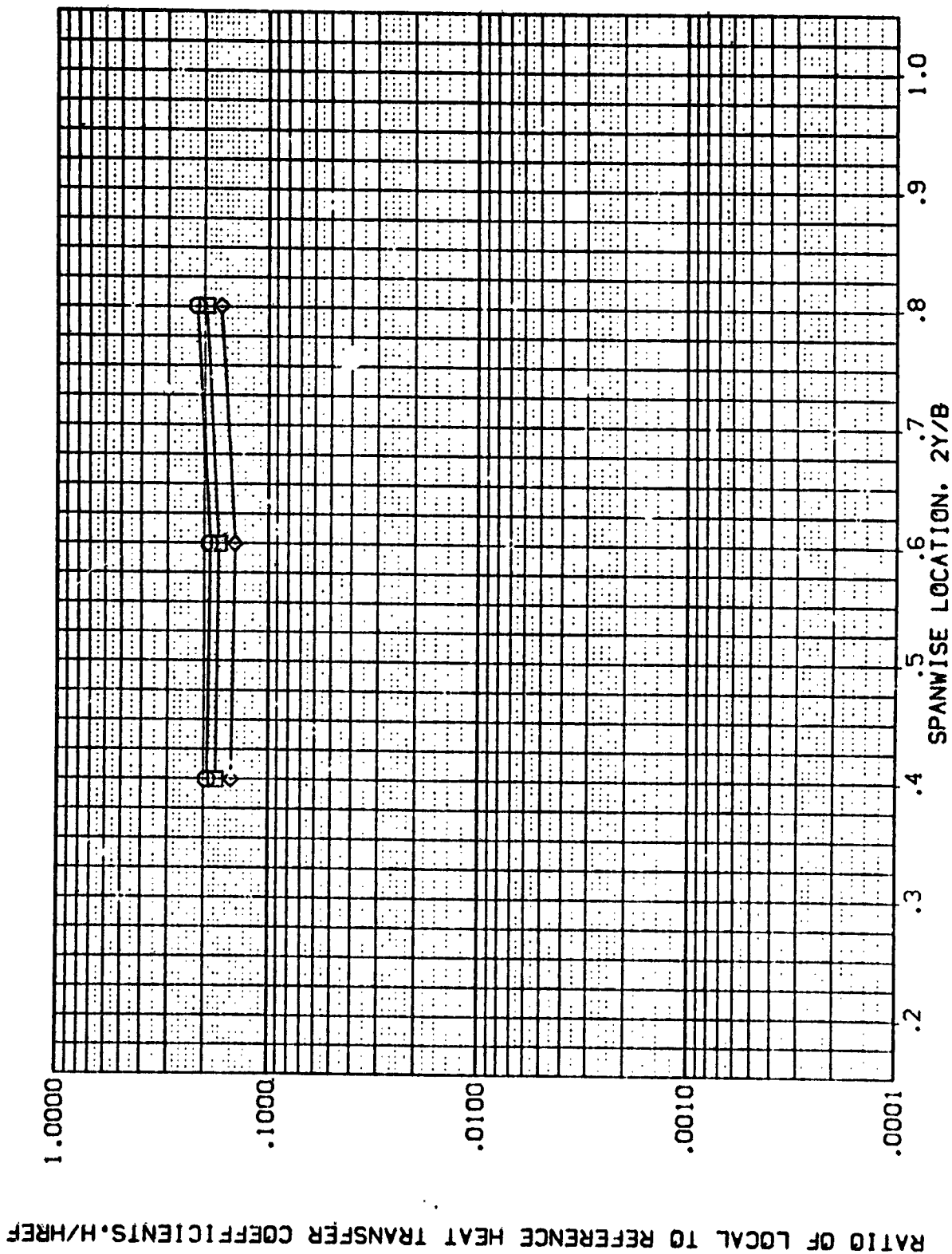


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV09)

SYMBOL HAW/HT X/C MACH
 □ .850 .200 5.220
 ◇ .900 .200 5.220
 1.000

PARAMETRIC VALUES
 ALPHA -30.00°
 RN/L 1.000
 BETA .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

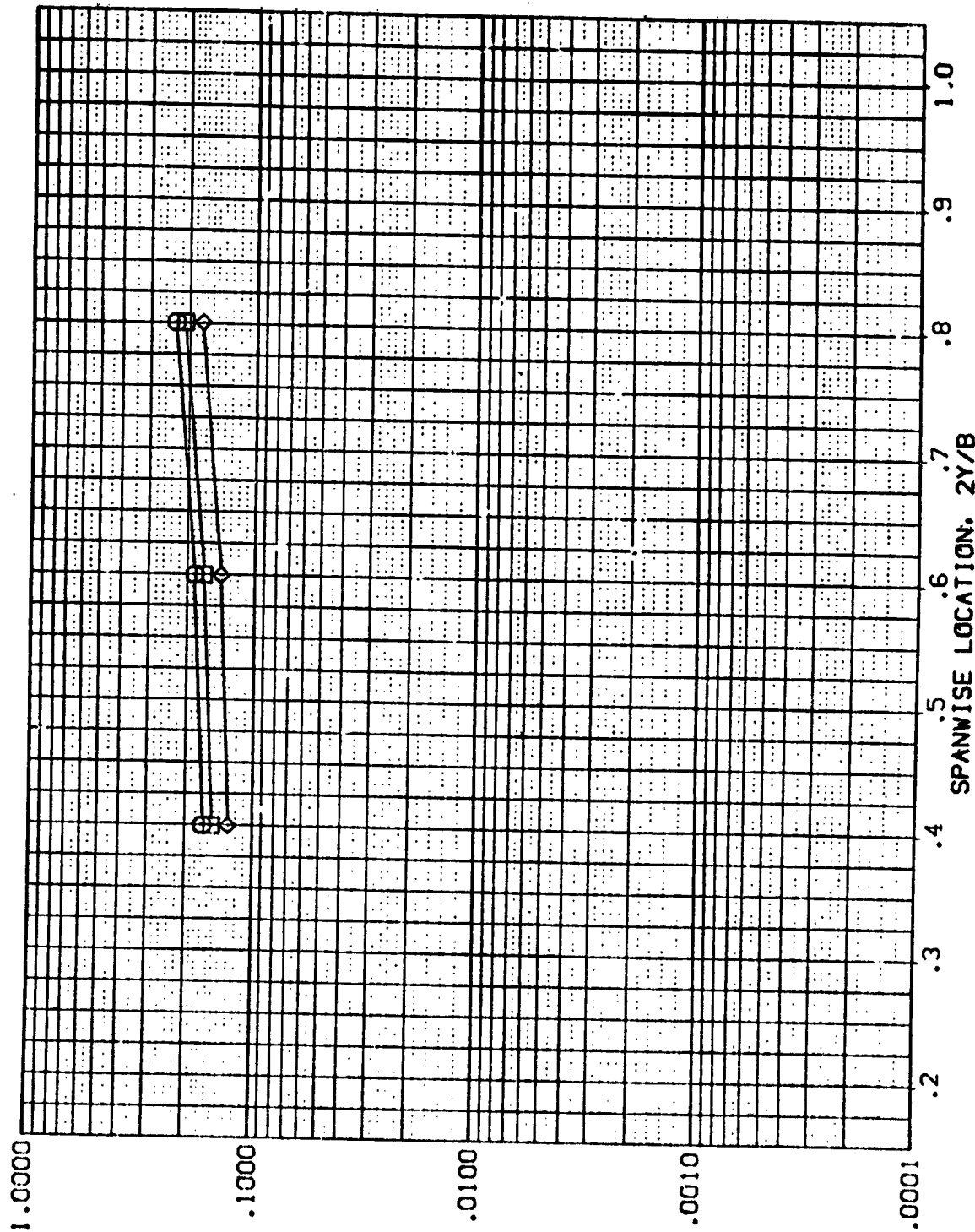


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG09)

SYMBOL HAW/HT X/C MACH
 ◊ .850 .400 5.220
 □ .900
 ◊ 1.000

PARAMETRIC VALUES
 ALPHA -30.000
 RN/L 1.000
 BETA .000

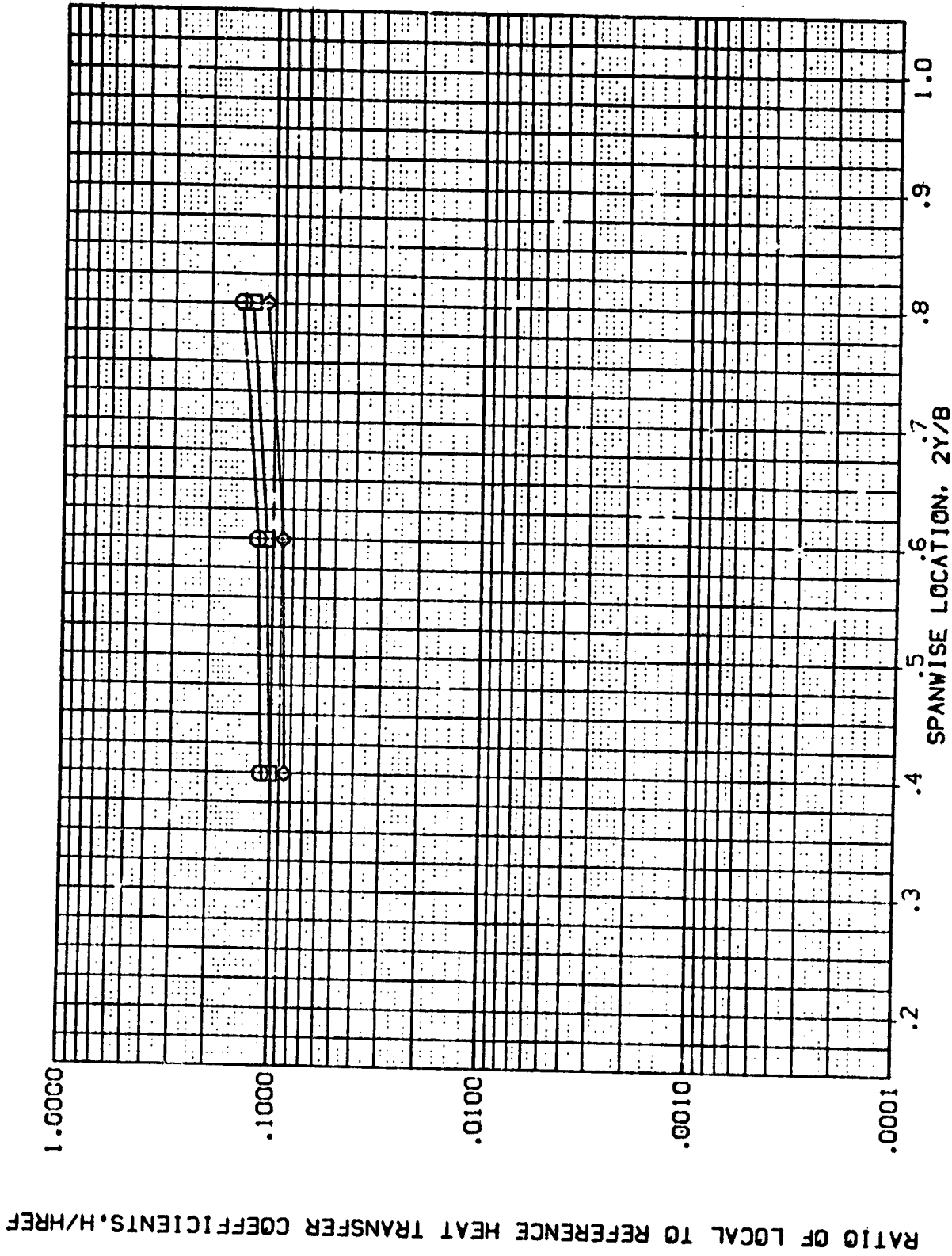


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

PARAMETRIC VALUES
 -30.0° α BETA .000
 1.000

SYMBOL HAW/HT X/C MACH
 .850 .600 5.220
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS: H/HREF

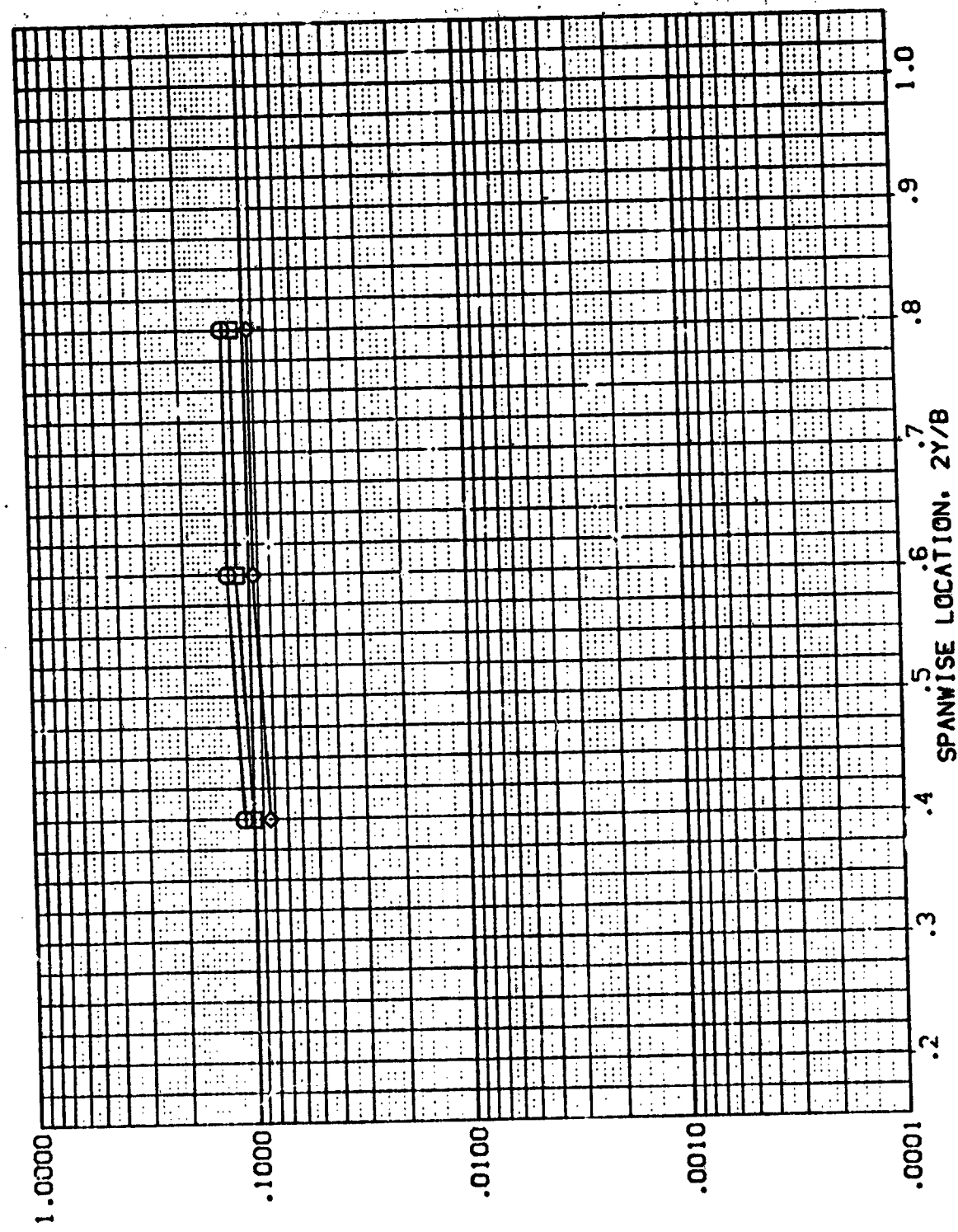


FIG. 23 RIGHT WING UPPER SURFACE. ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV609)

SYMBOL	HA/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.800	5.220	ALPHA
□	.900			RN/L
	1.000			BETA
				.000

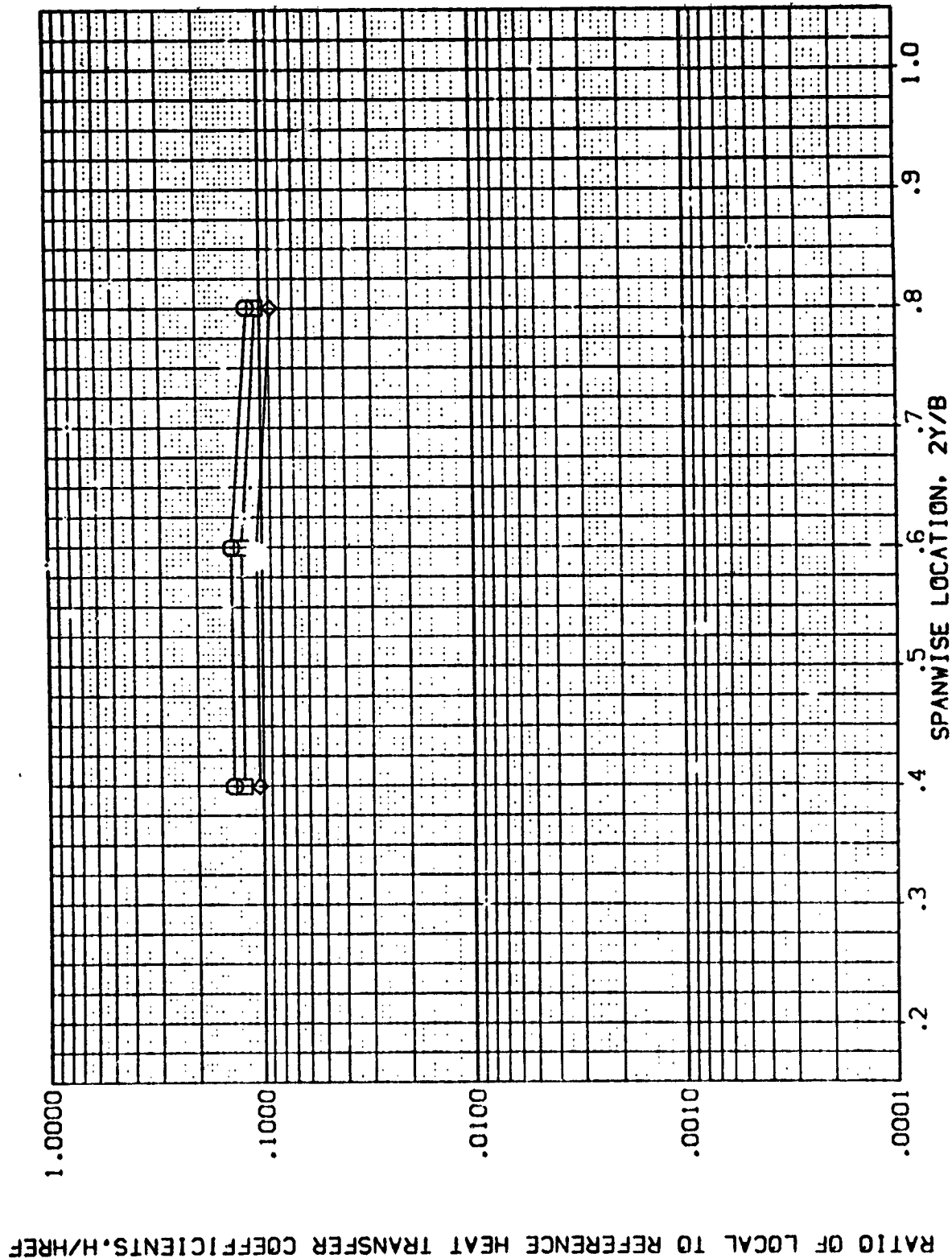


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV610)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
◇	.85C	200	5.299	60.000	.000
□	.900			4.000	
	1.000				

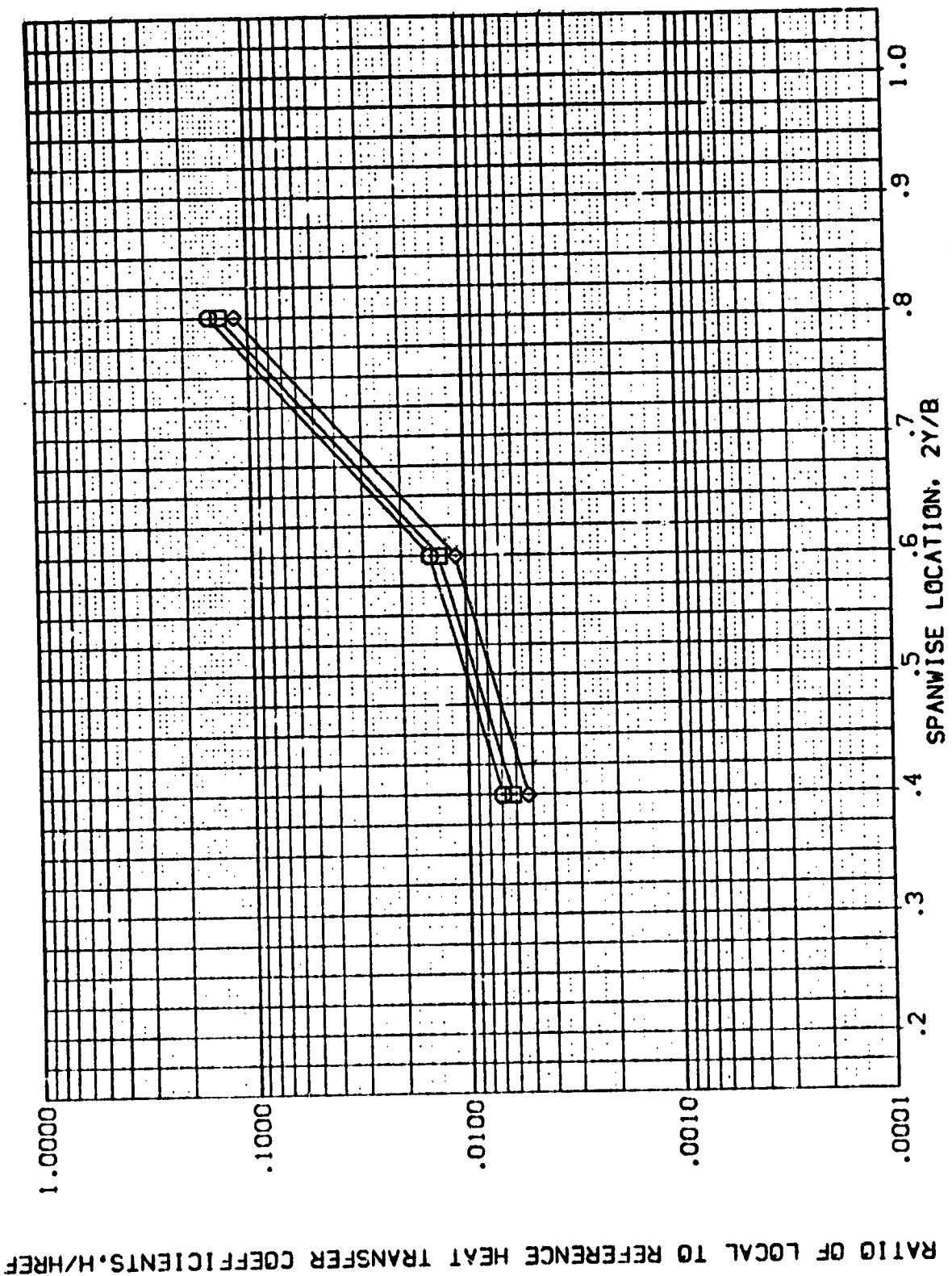


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G10)

PARAMETRIC VALUES
 ALPHA 60.000
 RN/L 4.000
 BETA .000

SYMBOL MACH
 .850
 .900
 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

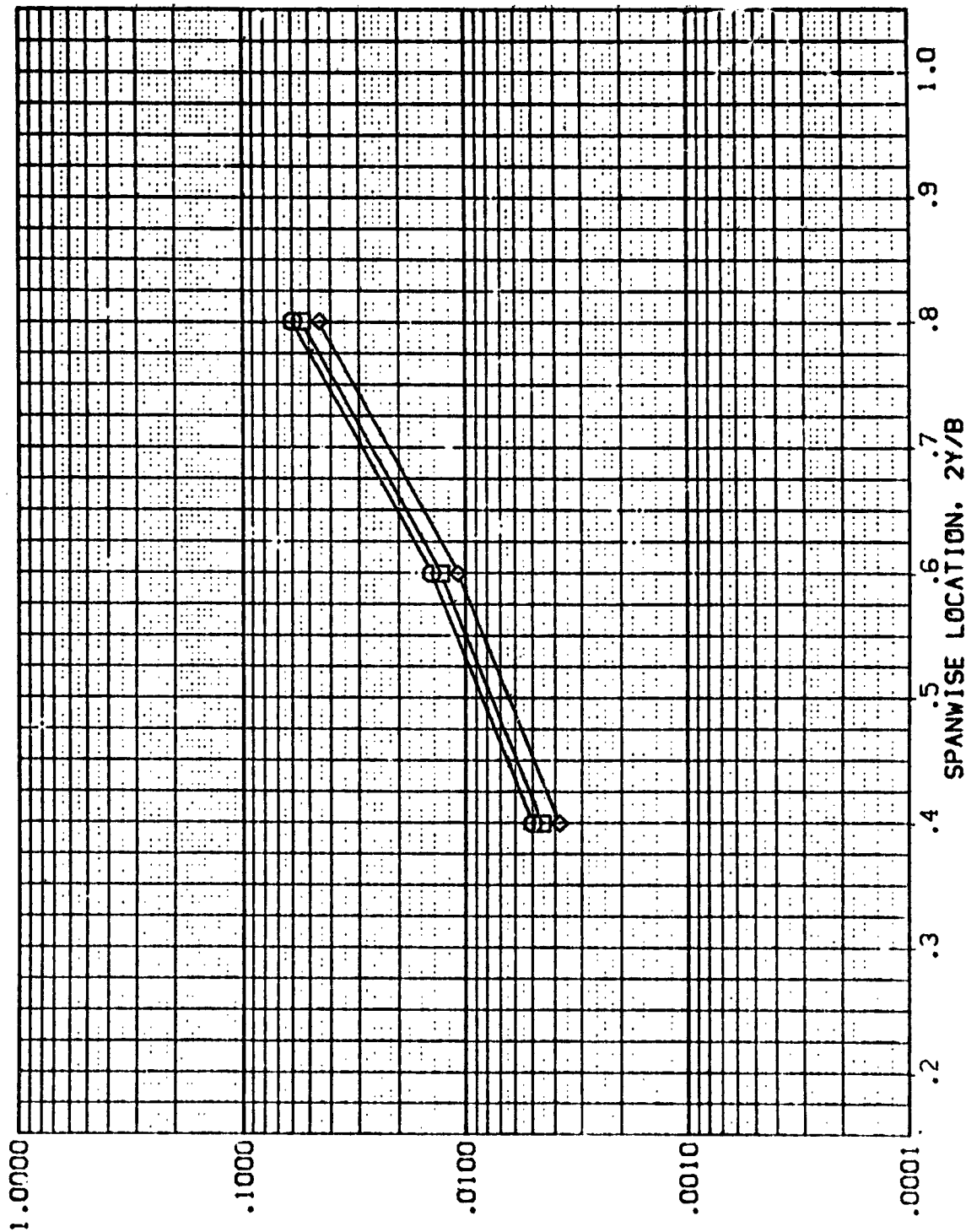


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G10)

SYMBOL \diamond \square \square

MAV/HT .850 .900 1.000

X/C .600

MACH 5.299

PARAMETRIC VALUES

ALPHA 60.000 4.000

BETA .000

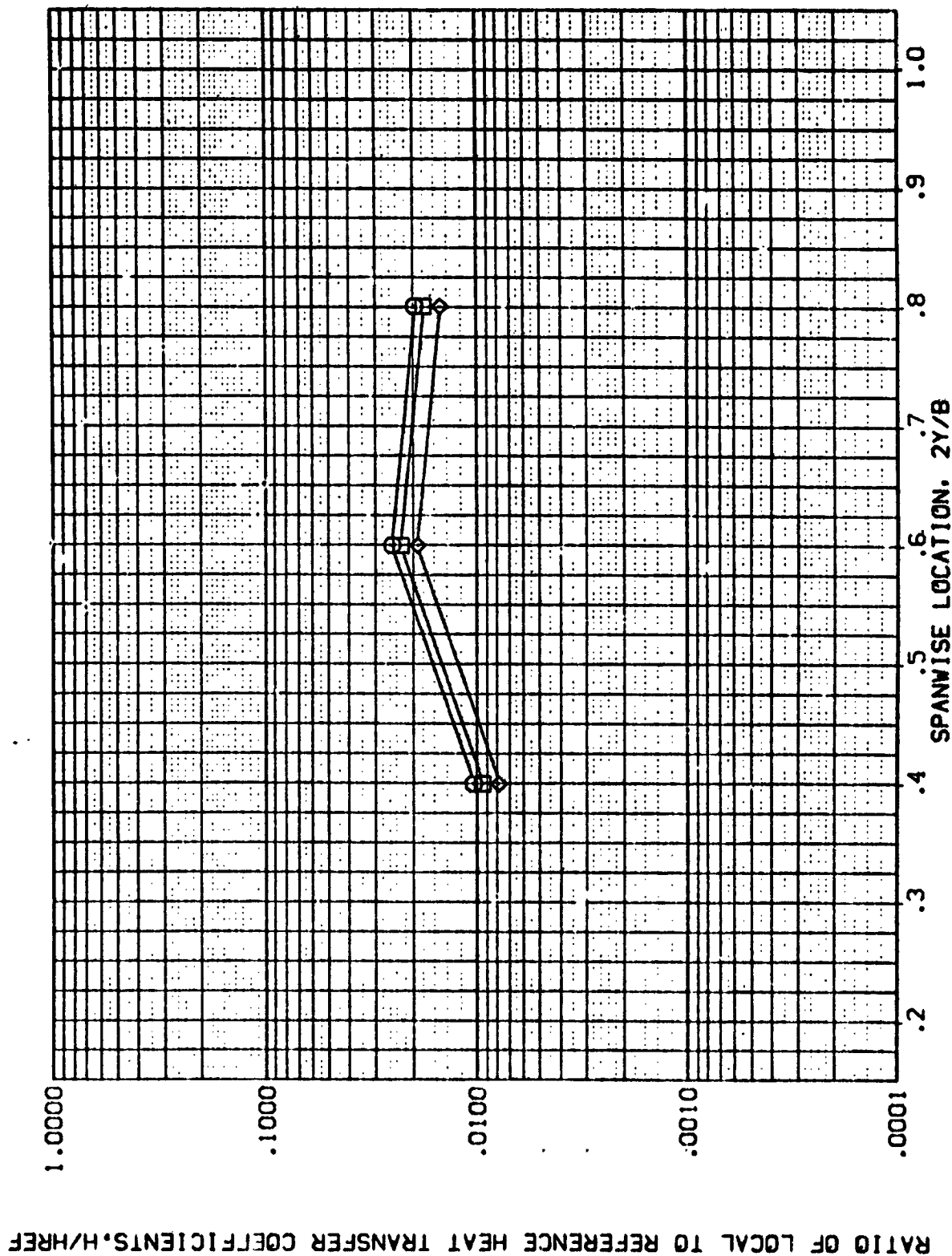


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G10)

SYMBOL	MAN/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
○	.850	.800	5.299	60.000	.000
□	.900			4.000	
◇	1.000				

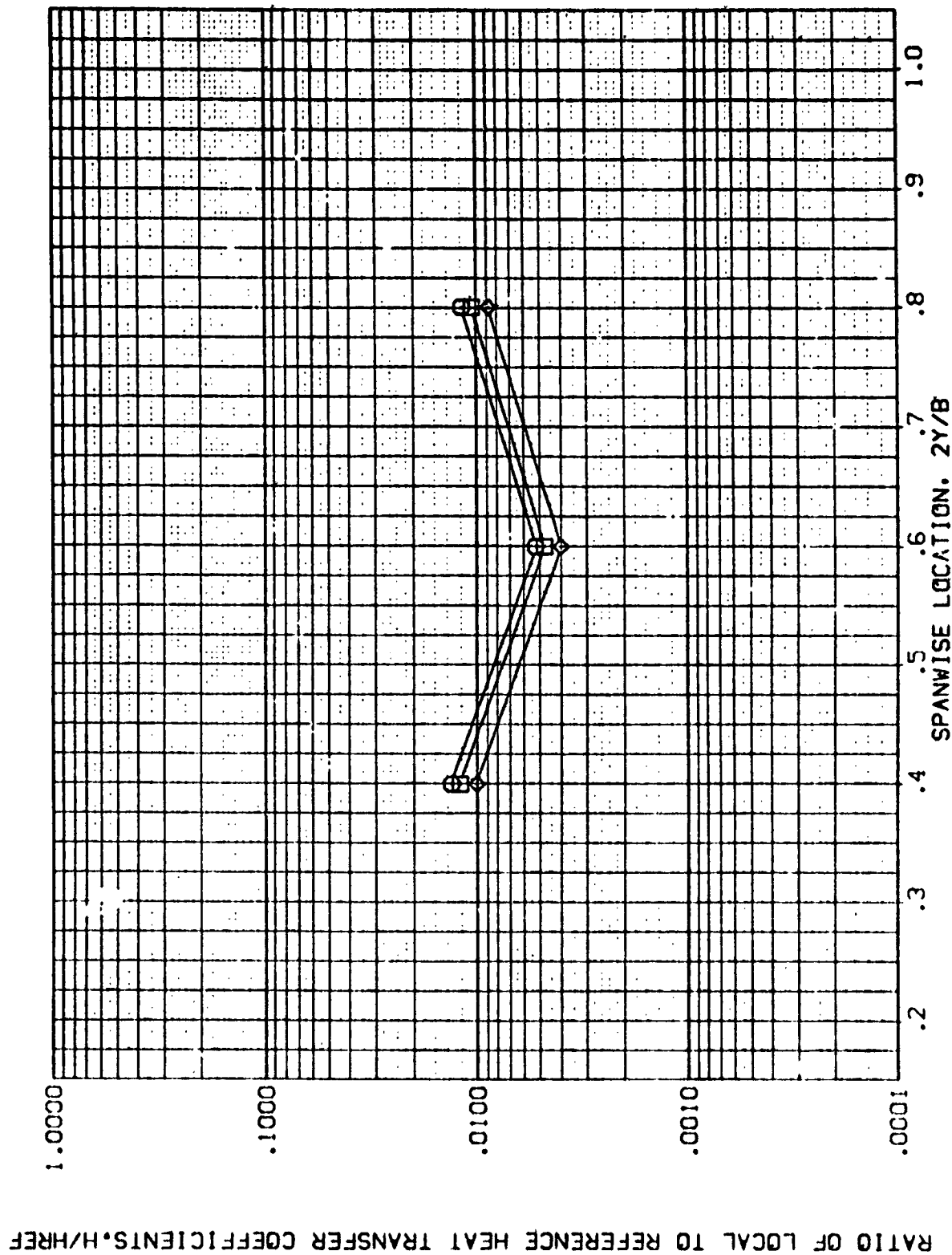


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 1H28 01+T1 WING UPPER SURFACE (REVG11)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
				RN/L	
◇	.850	.200	5.300	30.000	4.000
□	.900				
	1.000				

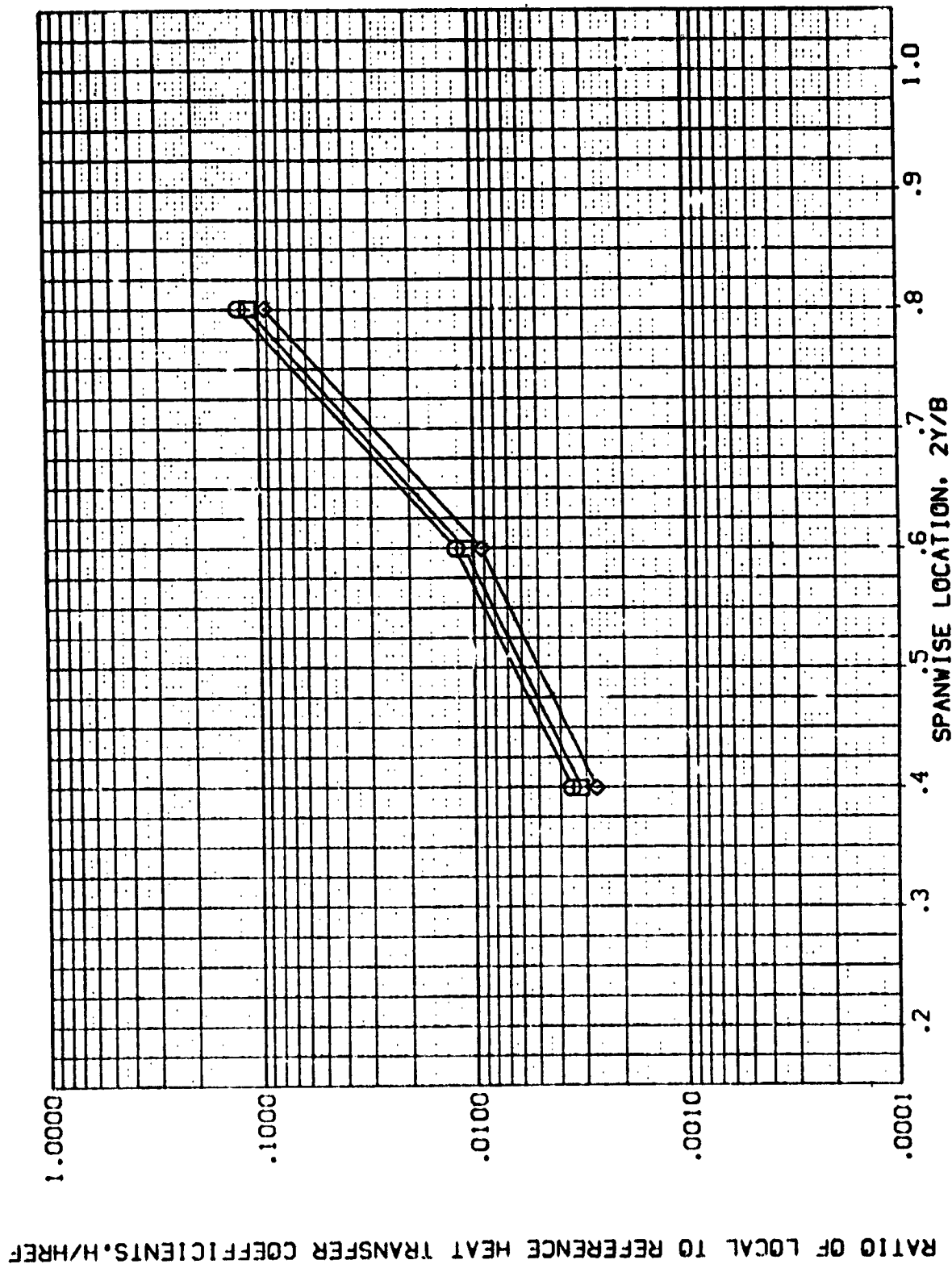


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

(REVG11)

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

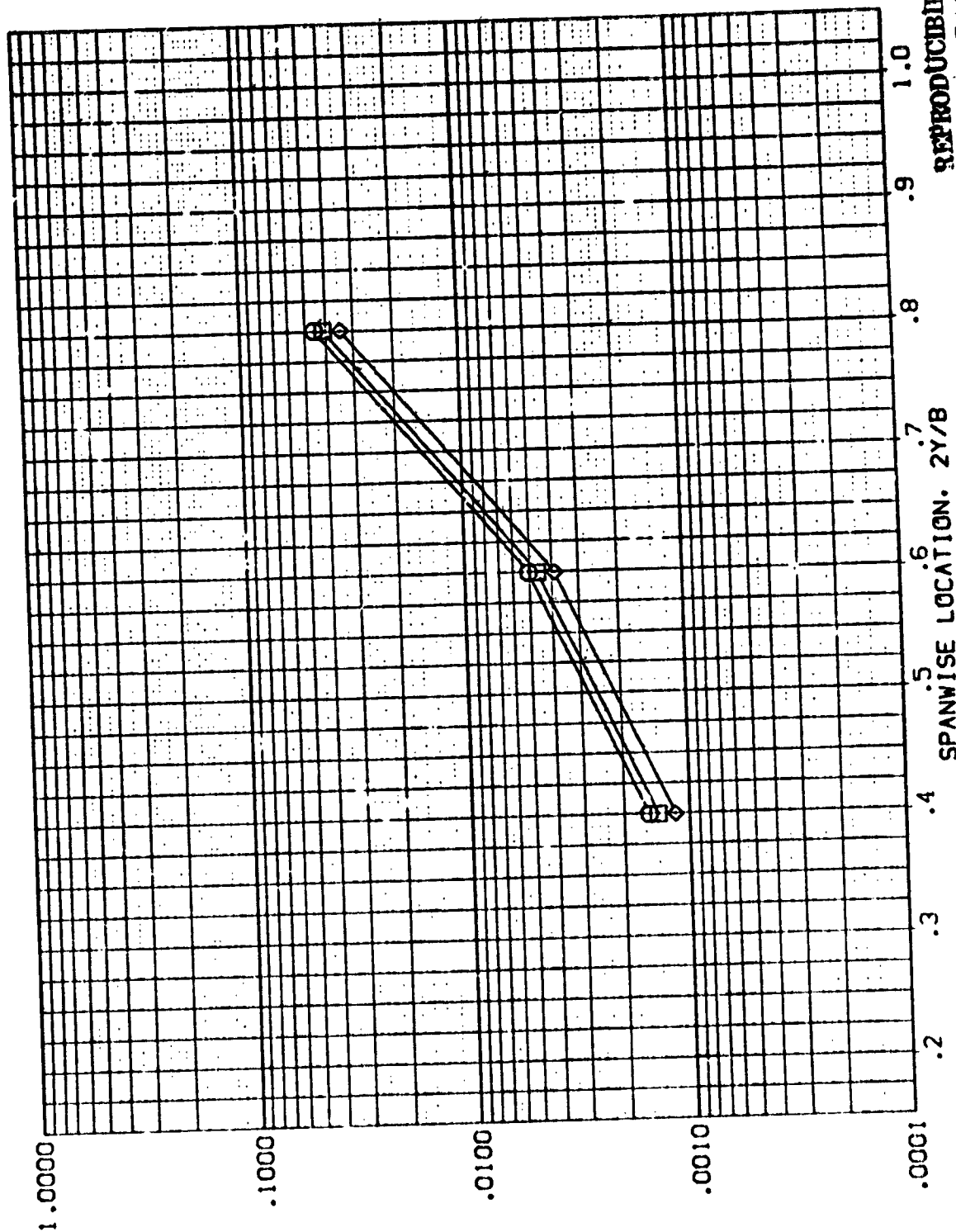
PARAMETRIC VALUES

30.000 BETA .000
4.000

ALPHA
RN/L

SYMBOL HAW/HT X/C MACH
◇ .850 .400 5.300
□ .900
○ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}



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FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
◇	.850	.600	5.300	30.0°	4.000
□	.900				
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

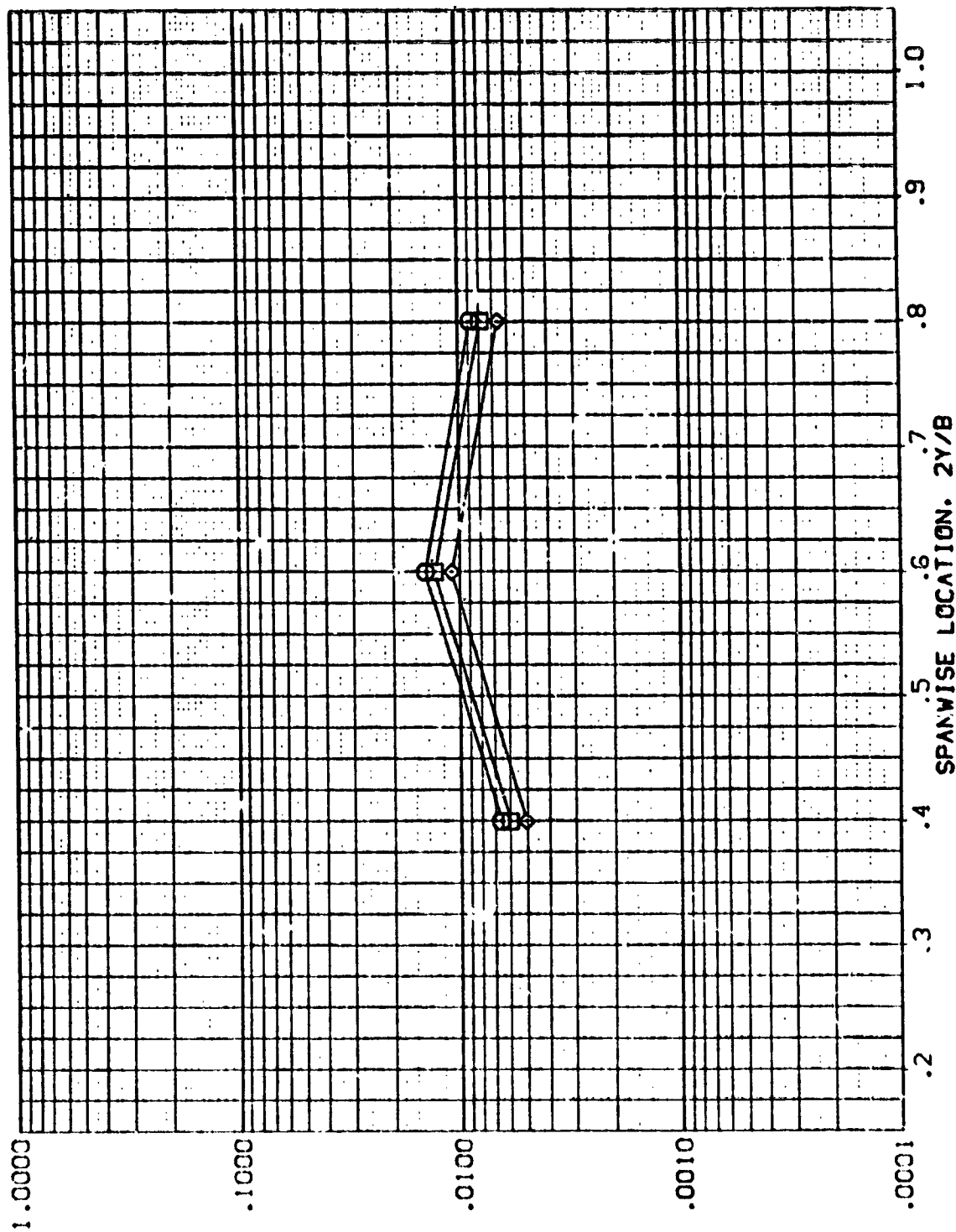


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG11)

SYMBOL	MAW/WT	X/C	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
○	.850	.800	5.300	30.000	.000
□	.900			4.000	
◇	1.000				

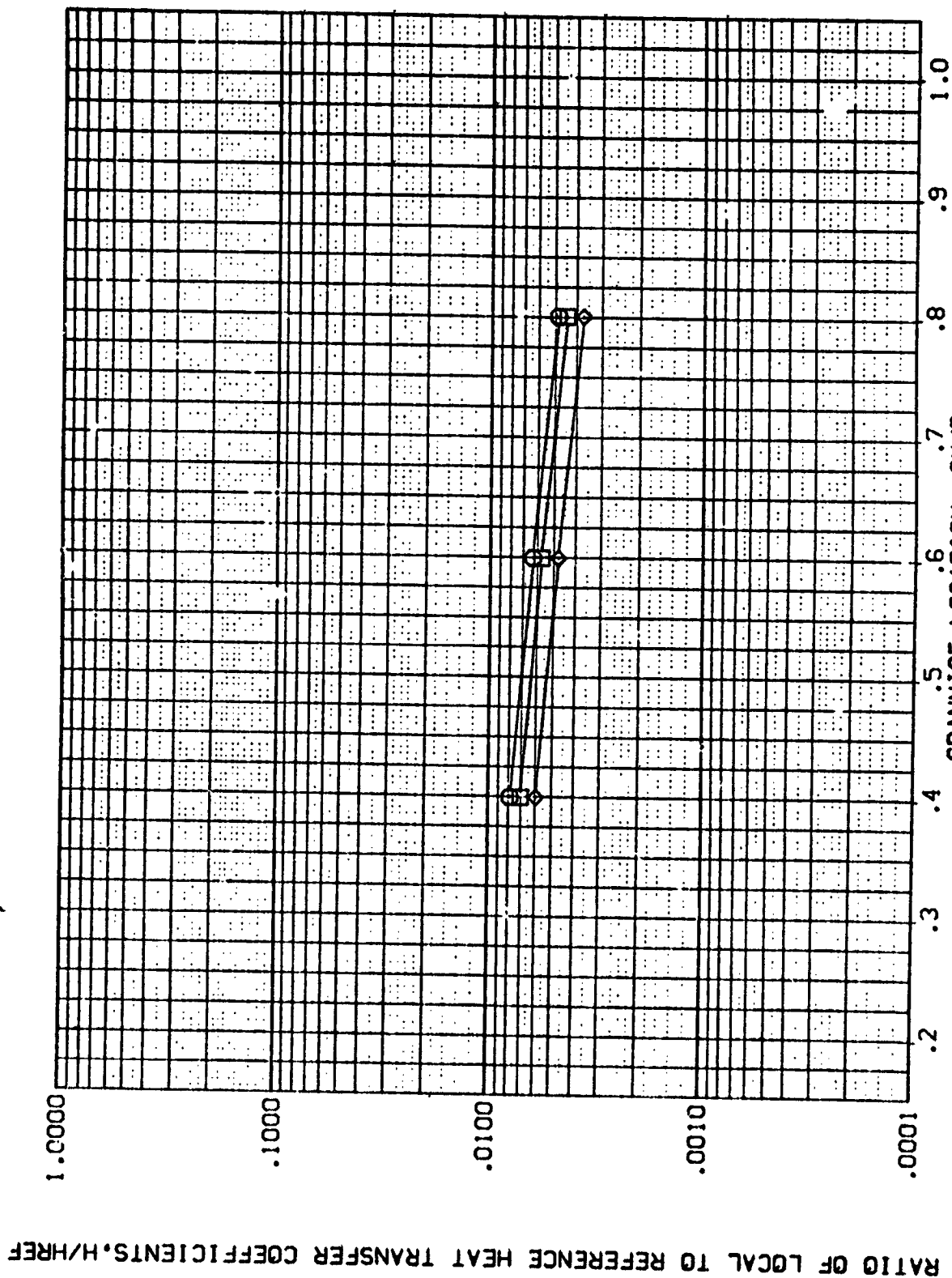


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV G12)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.200	5.220	ALPHA 30.000 BETA -5.000
□	.900			RN/L 1.000
◇	1.000			

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

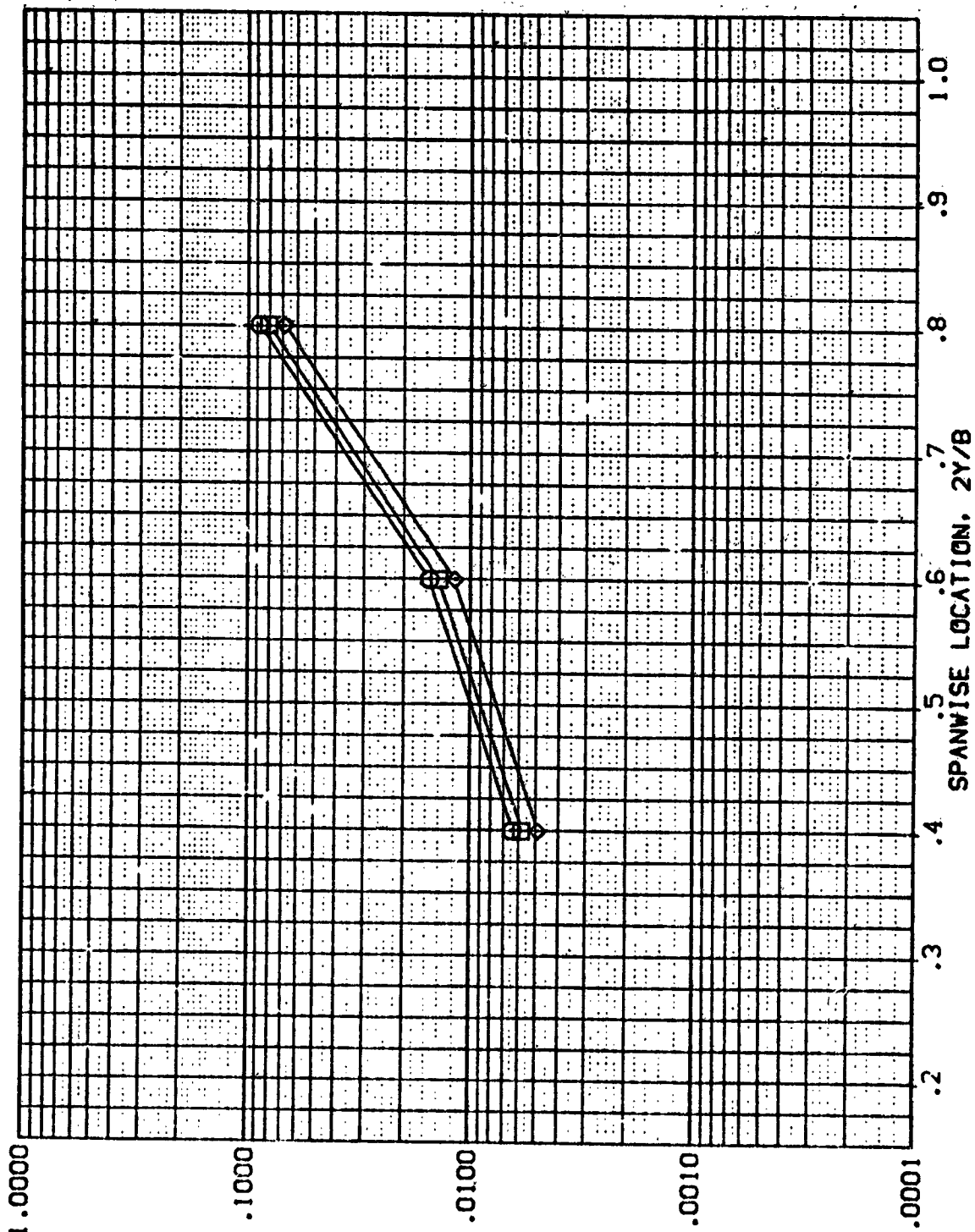


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG12)

SYMBOL	MAV/HT	X/C	MACH	PARAMETRIC VALUES
□	.850	.400	5.220	ALPHA 30.00°
◇	.900			BETA 1.000
	1.000			-3.000

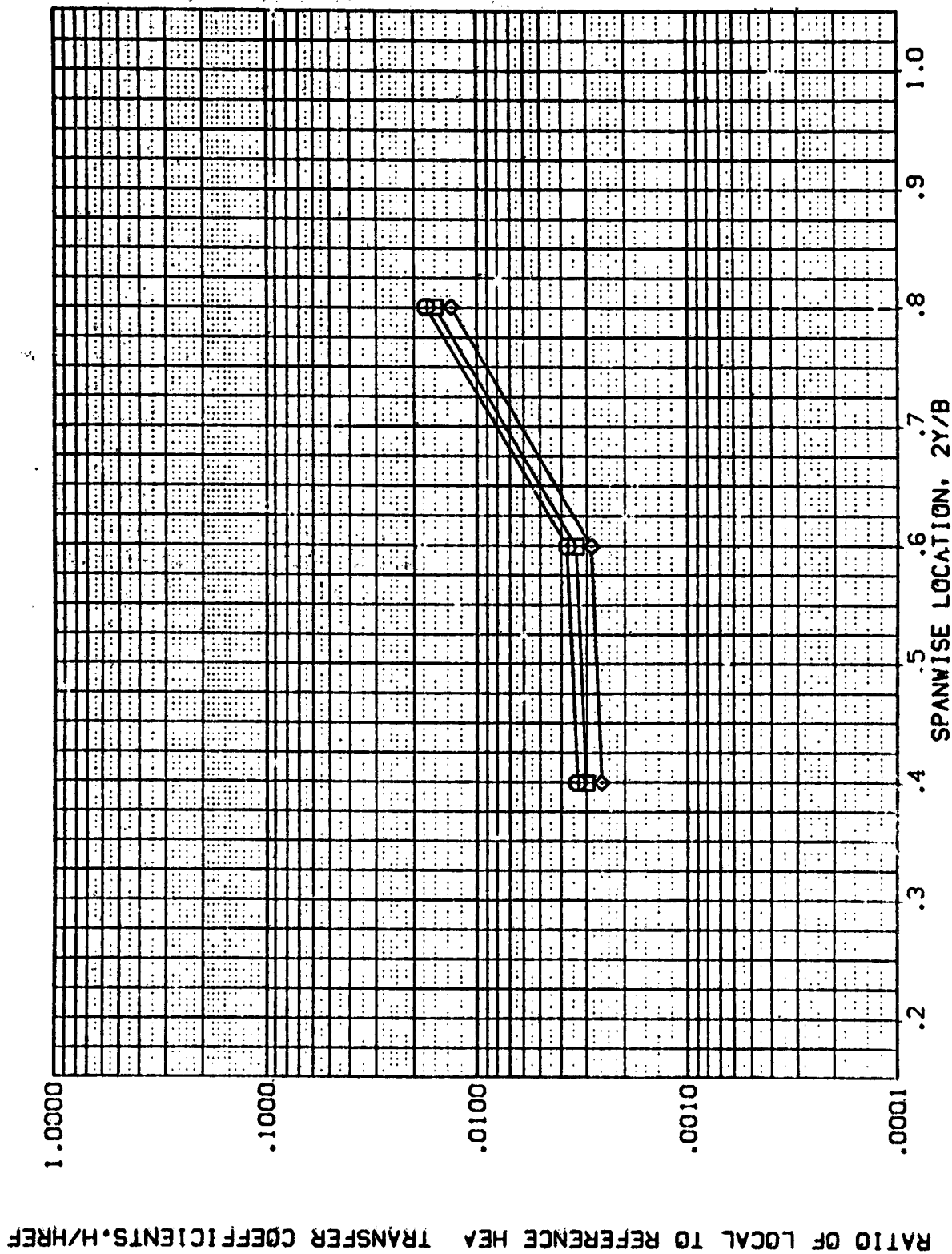


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV612)

SYMBOL	<div> <div>◇</div> <div>□</div> <div>○</div> </div>	<div> <div>MAV/HT</div> <div>.850</div> <div>.900</div> <div>1.000</div> </div>	<div> <div>X/C</div> <div>.600</div> </div>	<div> <div>MACH</div> <div>5.220</div> </div>	PARAMETRIC VALUES	
					ALPHA	BETA
					RV/L	1.000

-5.000

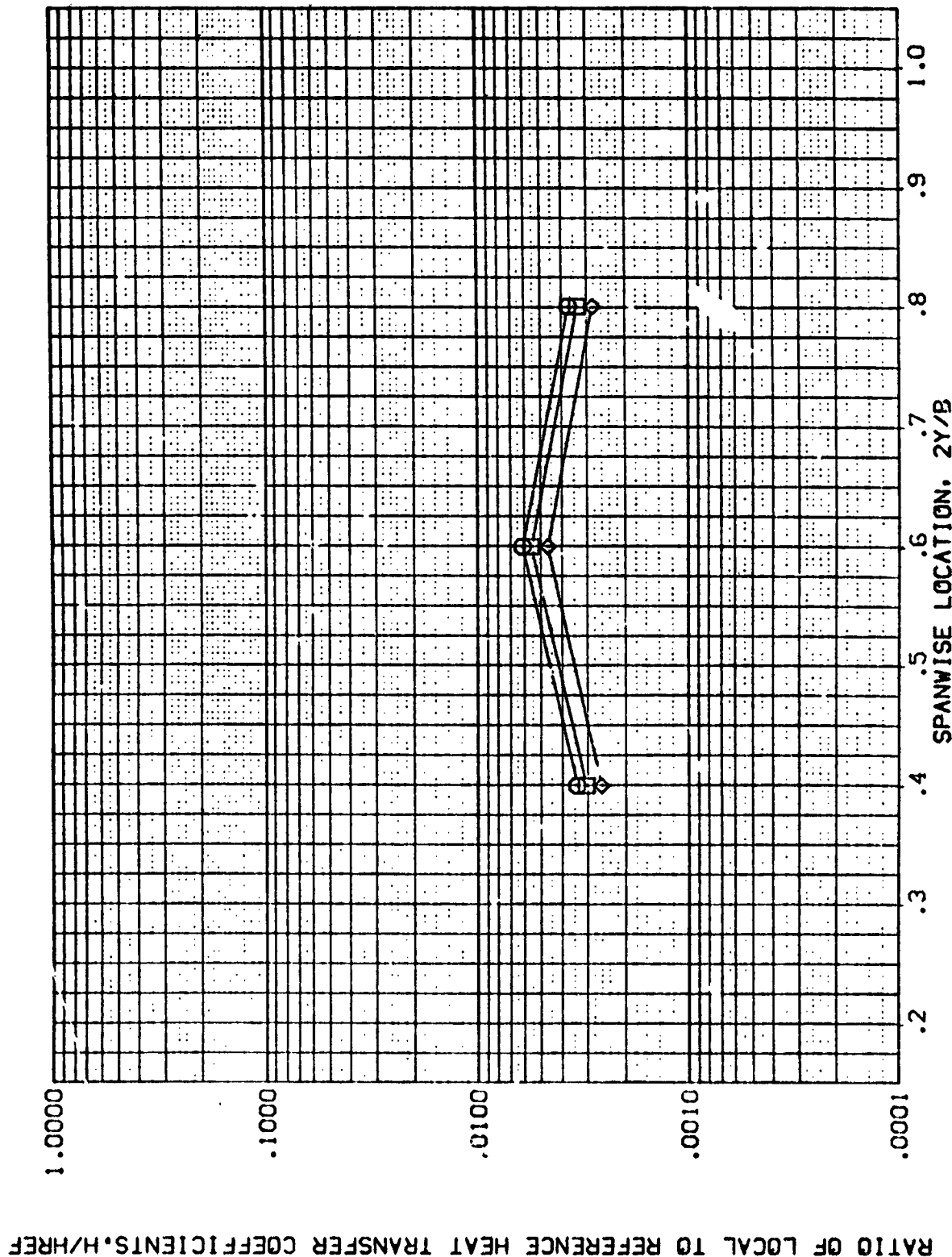


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG12)

SYMBOL	HAW/HT	X/C	MACH	PARAMETRIC VALUES
◇	.850	.800	5.220	30.000 BETA
□	.900			1.000
◇	1.000			-5.000

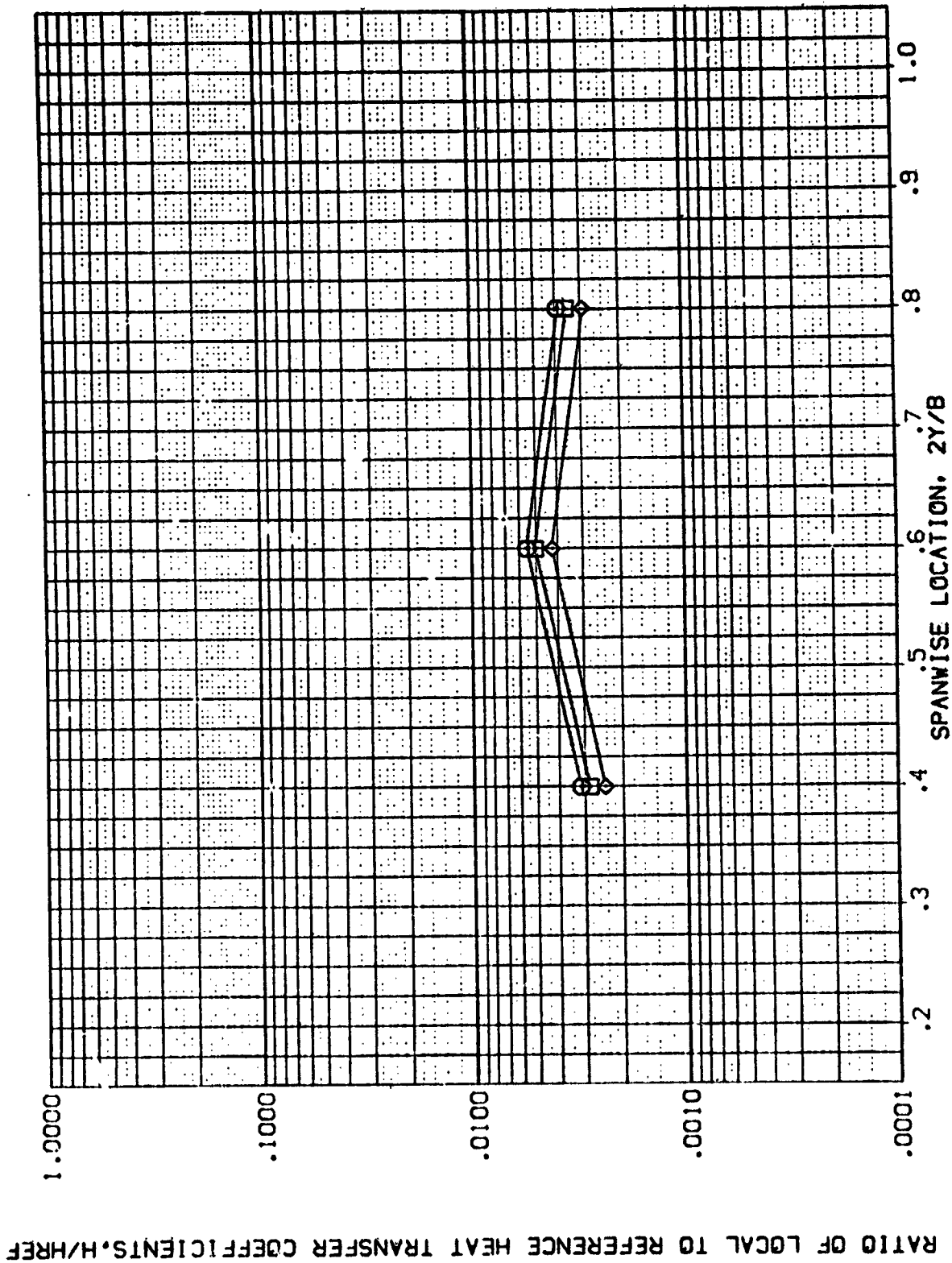


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA, $^\circ$	BETA	RV/L
(REVGO1)	AMES 3.5-195 [H28 01+T] WING UPPER SURFACE	.000	.000	1.000
(REVGO2)	AMES 3.5-195 [H28 01+T] WING UPPER SURFACE	30.000	.000	1.000
(REVGO3)	AMES 3.5-195 [H28 01+T] WING UPPER SURFACE	60.000	.000	1.000
(REVGO4)	AMES 3.5-195 [H28 01+T] WING UPPER SURFACE	90.000	.000	1.000
(REVGO5)	AMES 3.5-195 [H28 01+T] WING UPPER SURFACE	120.000	.000	1.000

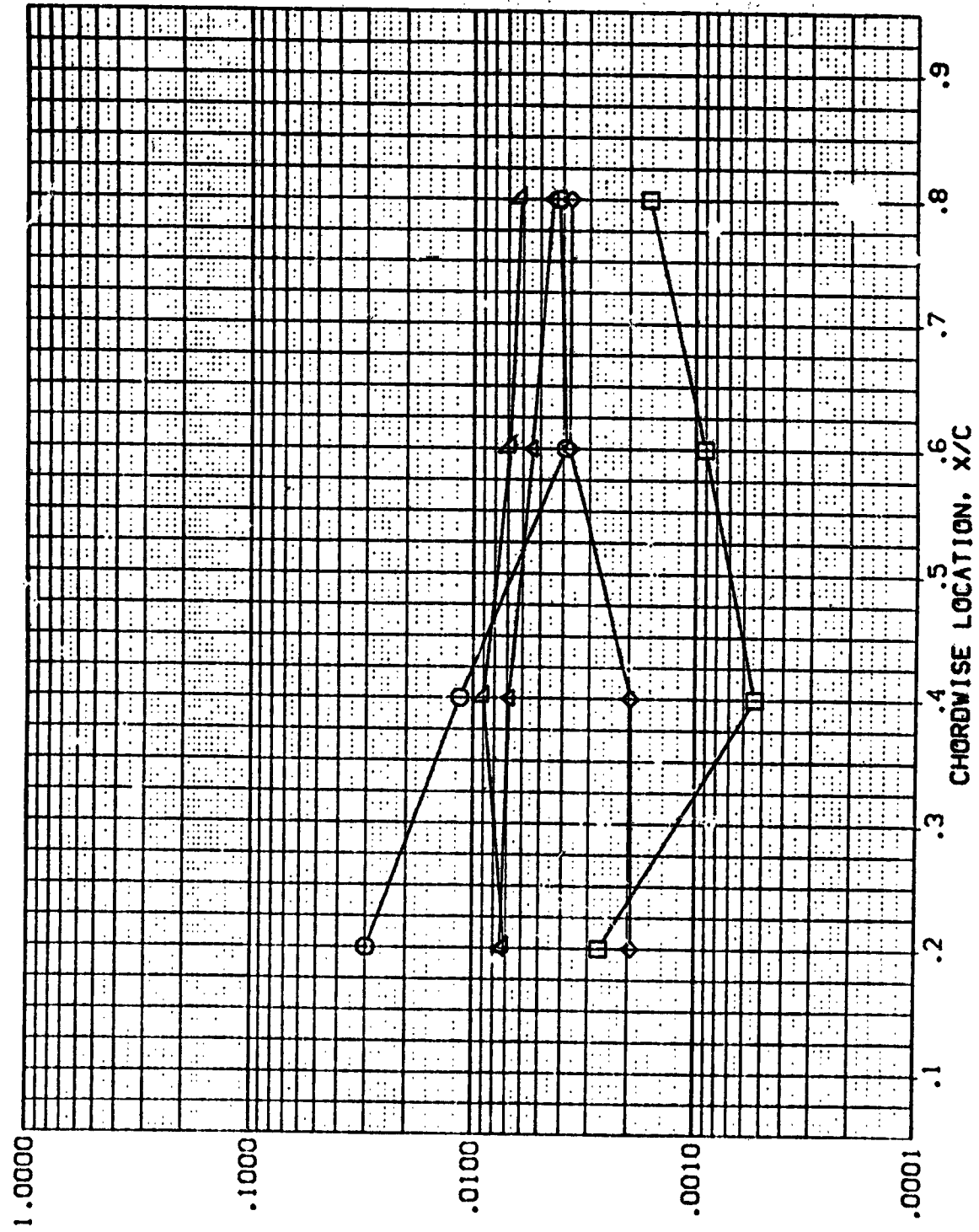


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .90C 2Y/B = .400

DATA SET SYMBOL

(REVGO1)
(REVGO2)
(REVGO3)
(REVGO4)
(REVGO5)

CONFIGURATION DESCRIPTION

AVES 3.5-195 IN28 01+T1 WING UPPER SURFACE
AVES 3.5-195 IN28 01+T1 WING UPPER SURFACE
AVES 3.5-195 IN28 01+T1 WING UPPER SURFACE
AVES 3.5-195 IN28 01+T1 WING UPPER SURFACE
AVES 3.5-195 IN28 01+T1 WING UPPER SURFACE

ALPHA: .000
30.000
60.000
90.000
120.000

BETA: .000
.000
.000
.000
.000

RM/L: 1.000
1.000
1.000
1.000
1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

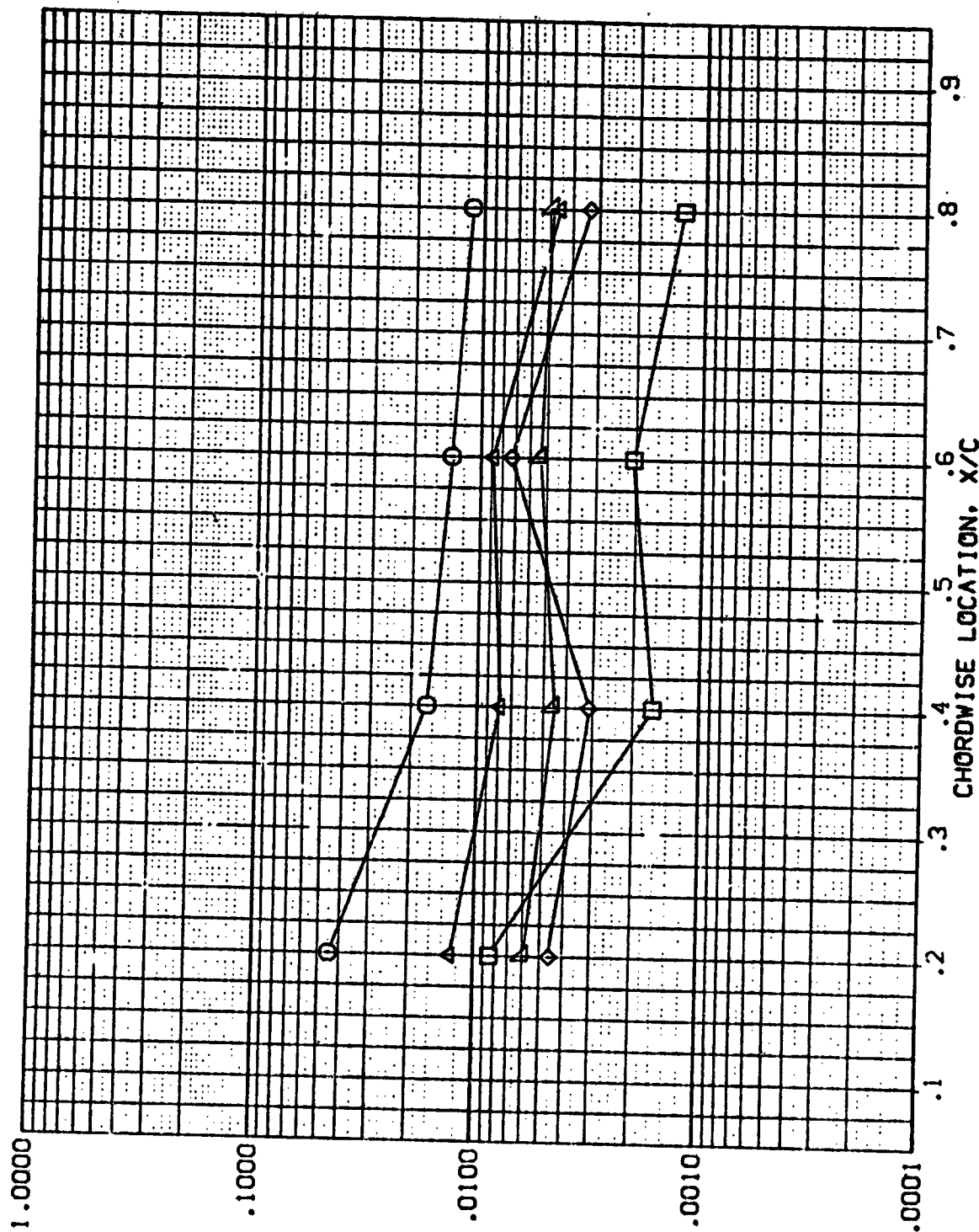


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .600

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RM/L
(REV001)	AMES 3.5-195 1428 01+11 WING UPPER SURFACE	.000	.000	1.000
(REV002)	AMES 3.5-195 1428 01+11 WING L-PPER SURFACE	30.000	.000	1.000
(REV003)	AMES 3.5-195 1428 01+11 WING UPPER SURFACE	60.000	.000	1.000
(REV004)	AMES 3.5-195 1428 01+11 WING UPPER SURFACE	90.000	.000	1.000
(REV005)	AMES 3.5-195 1428 01+11 WING UPPER SURFACE	120.000	.000	1.000

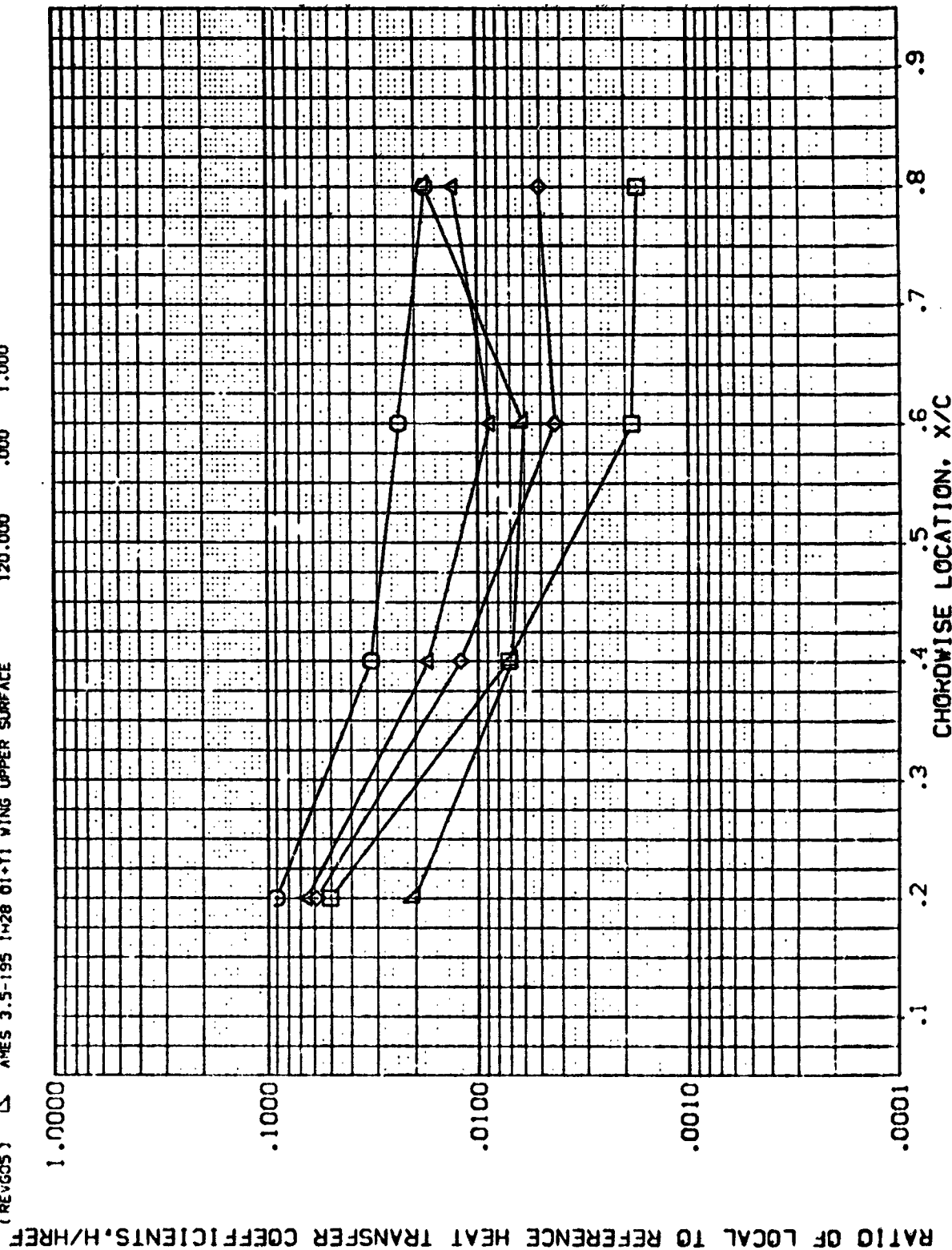


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .800

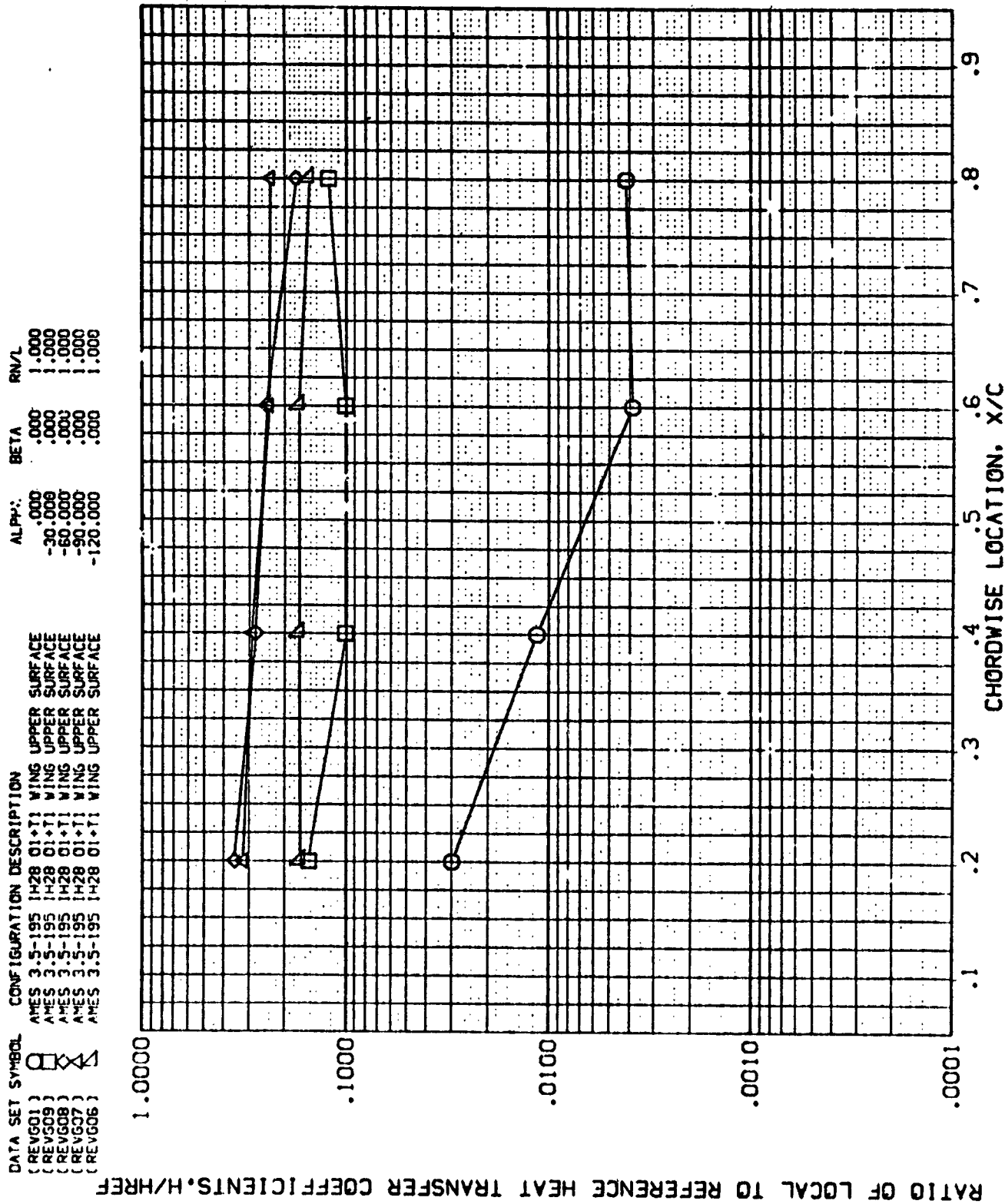


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

DATA SFT SYMBOL CONFIGURATION DESCRIPTION

(REV601)	AMES 3.5-195	I428 01+T1	WING	UPPER SURFACE
(REV602)	AMES 3.5-195	I428 01+T1	WING	UPPER SURFACE
(REV603)	AMES 3.5-195	I428 01+T1	WING	UPPER SURFACE
(REV604)	AMES 3.5-195	I428 01+T1	WING	UPPER SURFACE
(REV605)	AMES 3.5-195	I428 01+T1	WING	UPPER SURFACE

ALPHA BETA RV/L

.000	.000	1.000
-30.000	.000	1.000
-60.000	.000	1.000
-90.000	.000	1.000
-120.000	.000	1.000

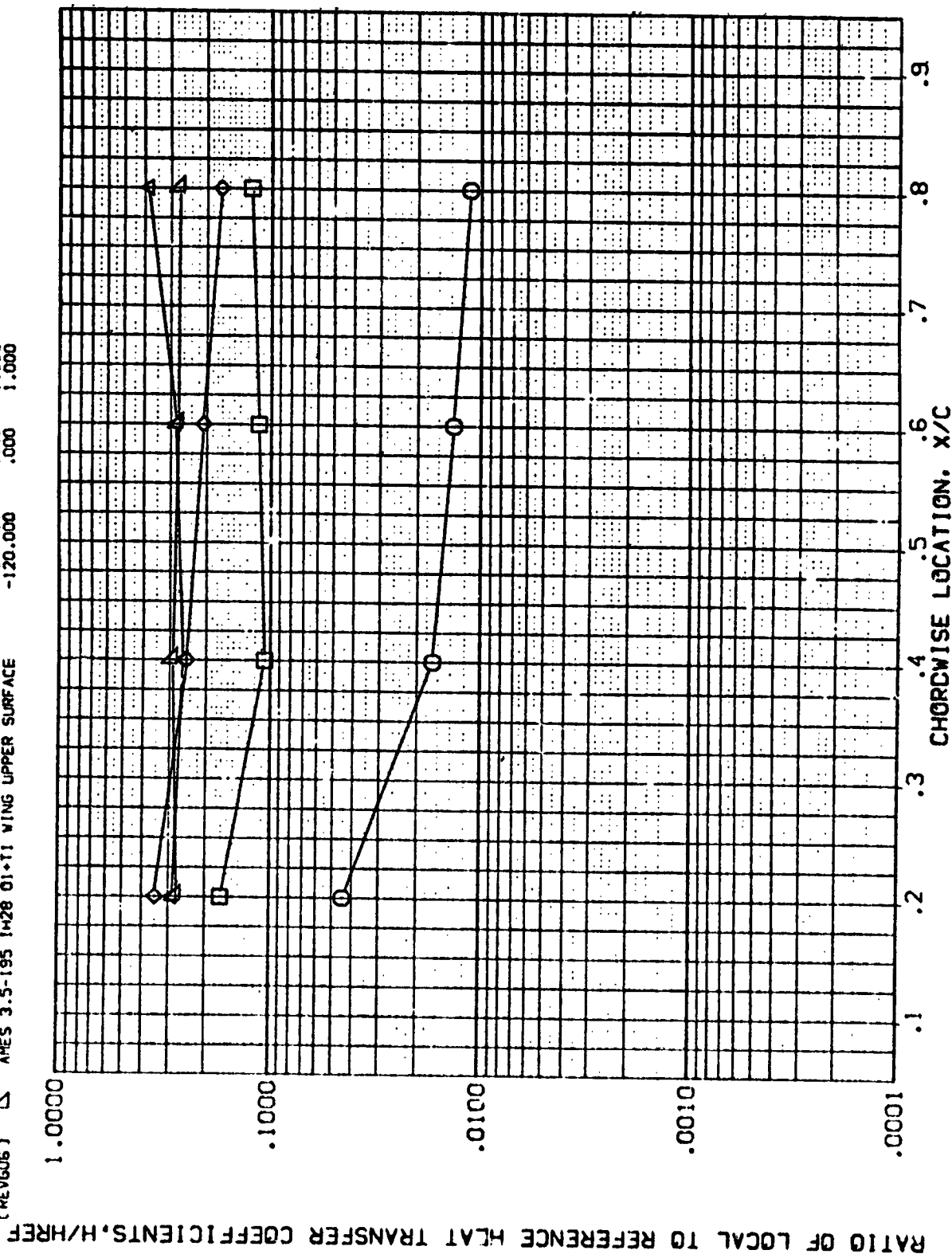


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .600

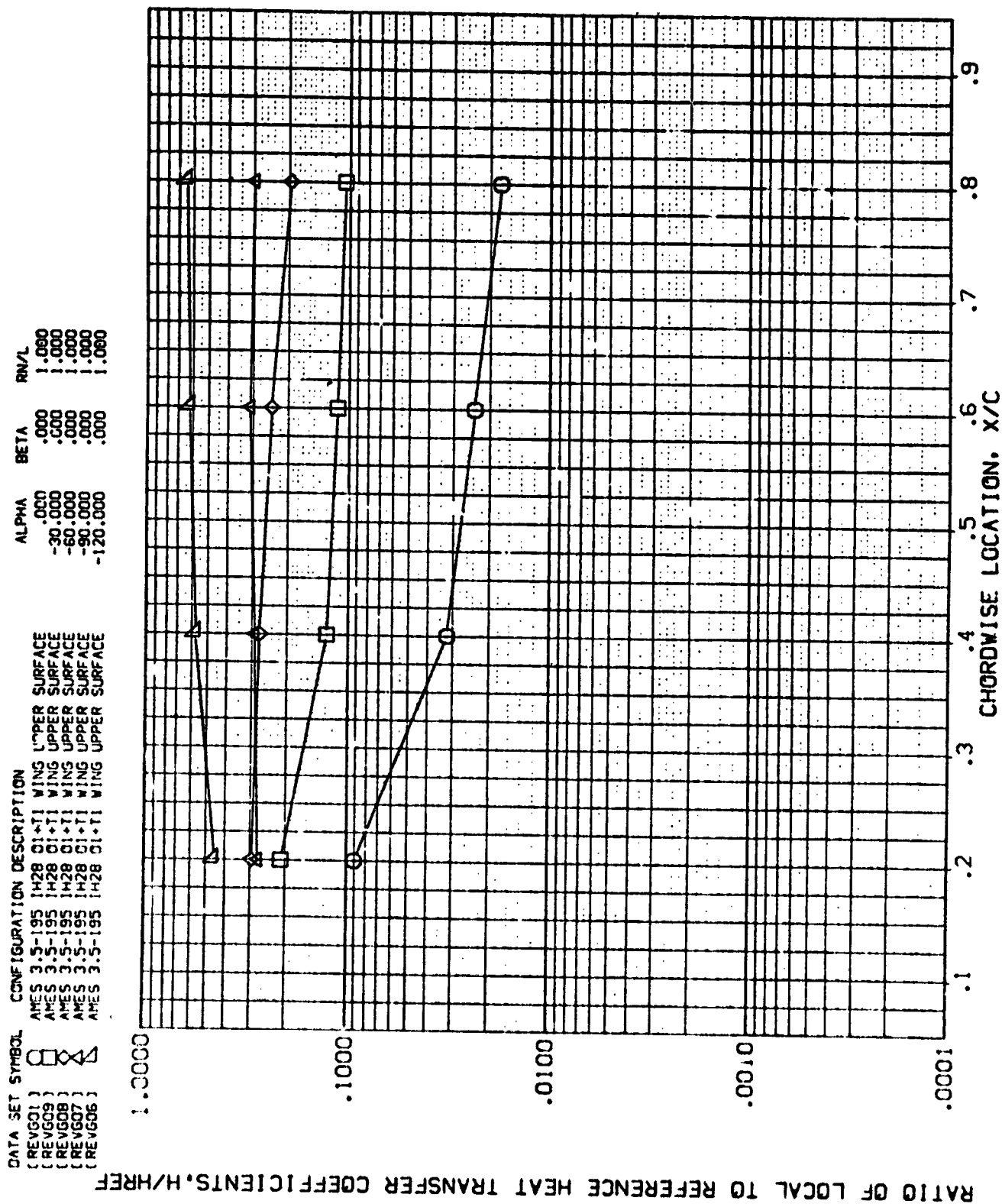



FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .800

..RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

DATA SET SYMBOL:  CONFIGURATION DESCRIPTION
 (REV002) AMES 3-5-195 [428 01+1] WING UPPER SURFACE
 (REV011) AMES 3-5-195 [428 01+1] WING UPPER SURFACE
 (REV003) AMES 3-5-195 [428 01+1] WING UPPER SURFACE
 (REV010) AMES 3-5-195 [428 01+1] WING UPPER SURFACE

ALPHA: 30.000
 30.000
 60.000
 60.000
 BETA: .000
 .000
 .000
 .000
 RN/L: 1.000
 4.000
 1.000
 4.000

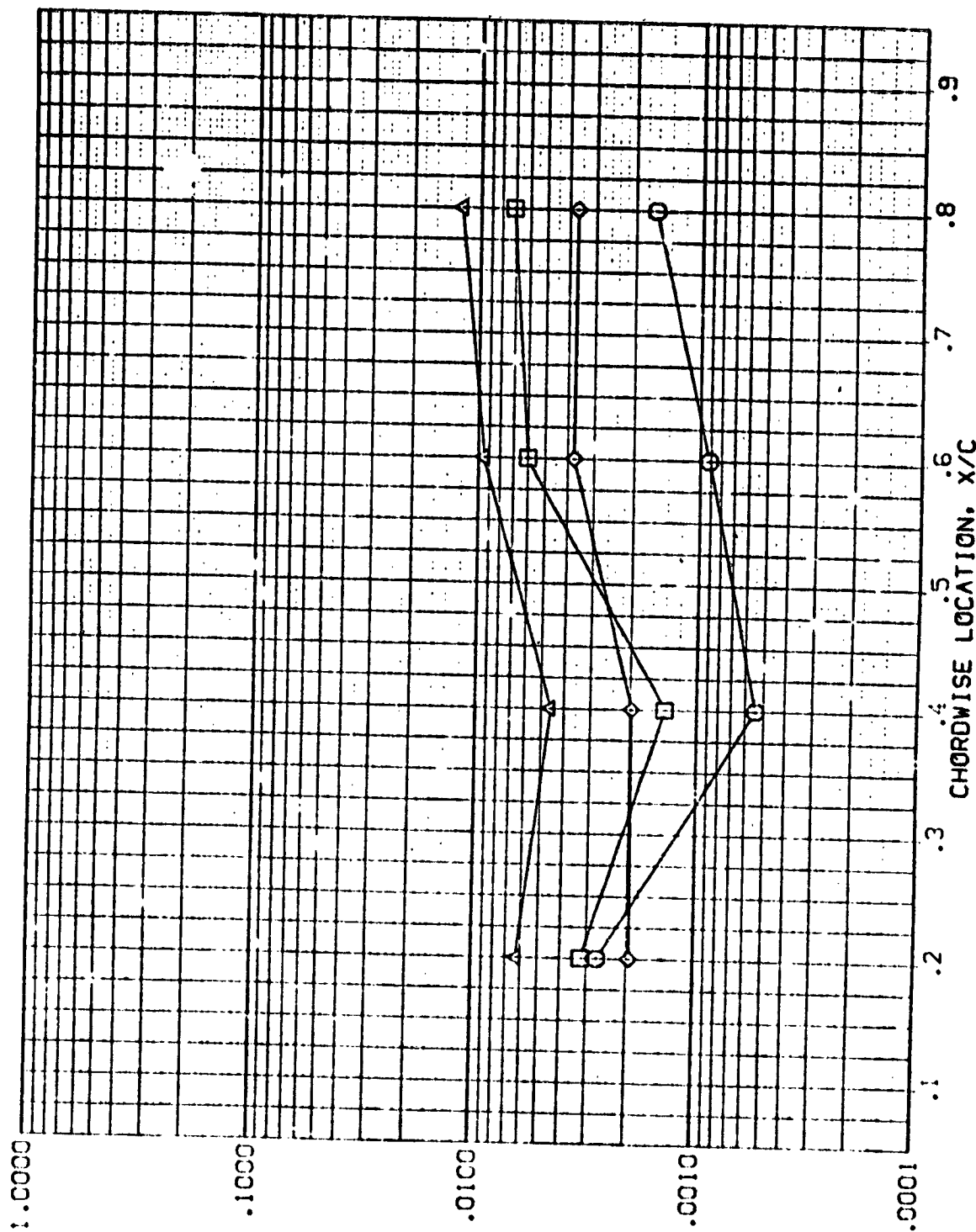


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .400

DATA SET SYMBOL CONFIGURATION DESCRIPTION

AVES 3.5-195 [4-8 01+1] WING UPPER SURFACE
 AVES 3.5-195 [4-8 01+1] WING UPPER SURFACE
 AVES 3.5-195 [4-8 01+1] WING UPPER SURFACE
 AVES 3.5-195 [4-8 01+1] WING UPPER SURFACE

ALPHA BETA RN/L
 30.000 .000 1.000
 30.000 .000 4.000
 60.000 .000 1.000
 60.000 .000 4.000

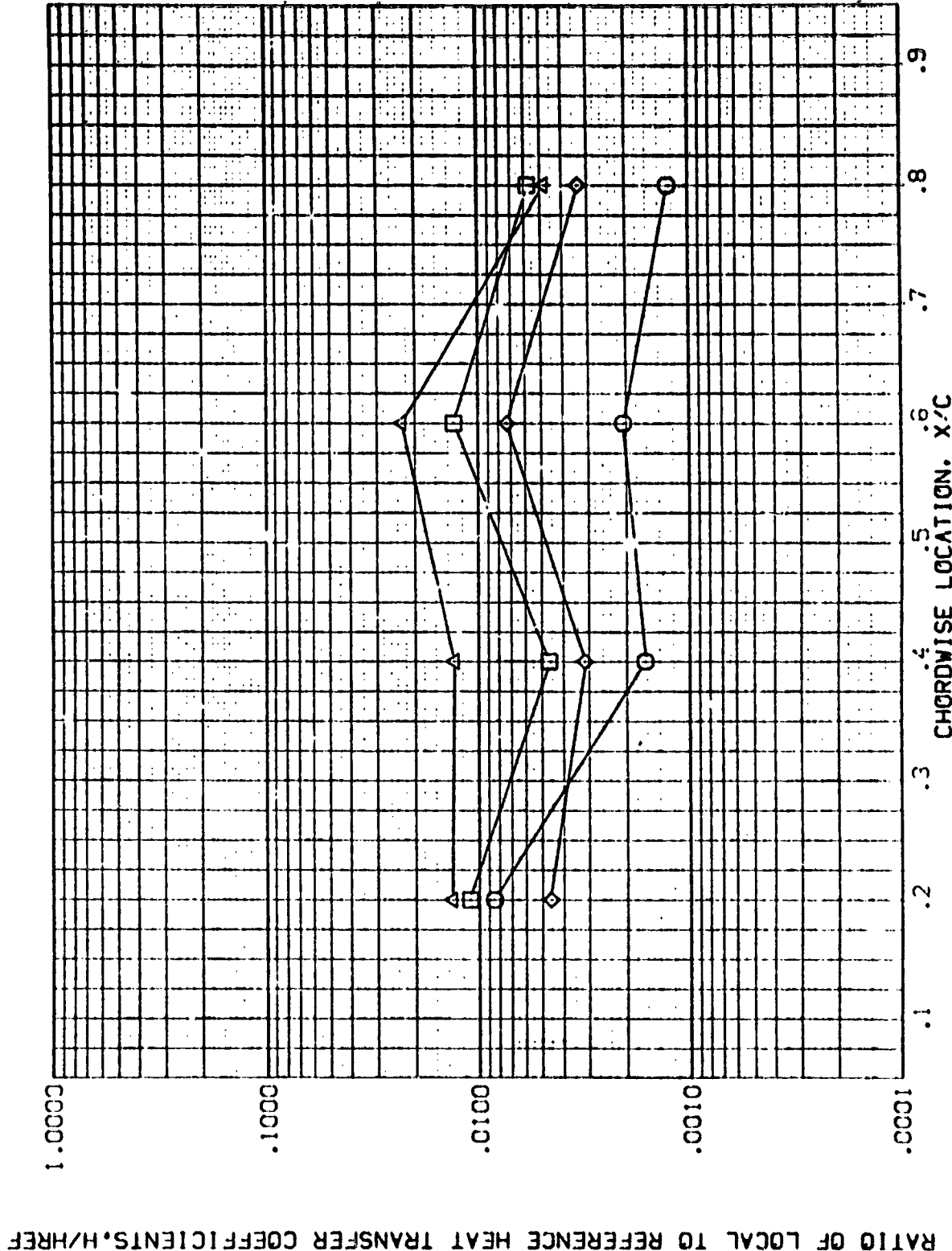


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 H_{AW}/H_T = .900 2Y/B = .500

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALF 4A	BETA	RNVL
(REV302)	AMES 3.5-195 [H28 01+11] WING UPPER SURFACE	30.000	.000	1.000
(REV311)	AMES 3.5-195 [H28 01+11] WING UPPER SURFACE	30.000	.000	4.000
(REV303)	AMES 3.5-195 [H28 01+11] WING UPPER SURFACE	60.000	.000	1.000
(REV310)	AMES 3.5-195 [H28 01+11] WING UPPER SURFACE	60.000	.000	4.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

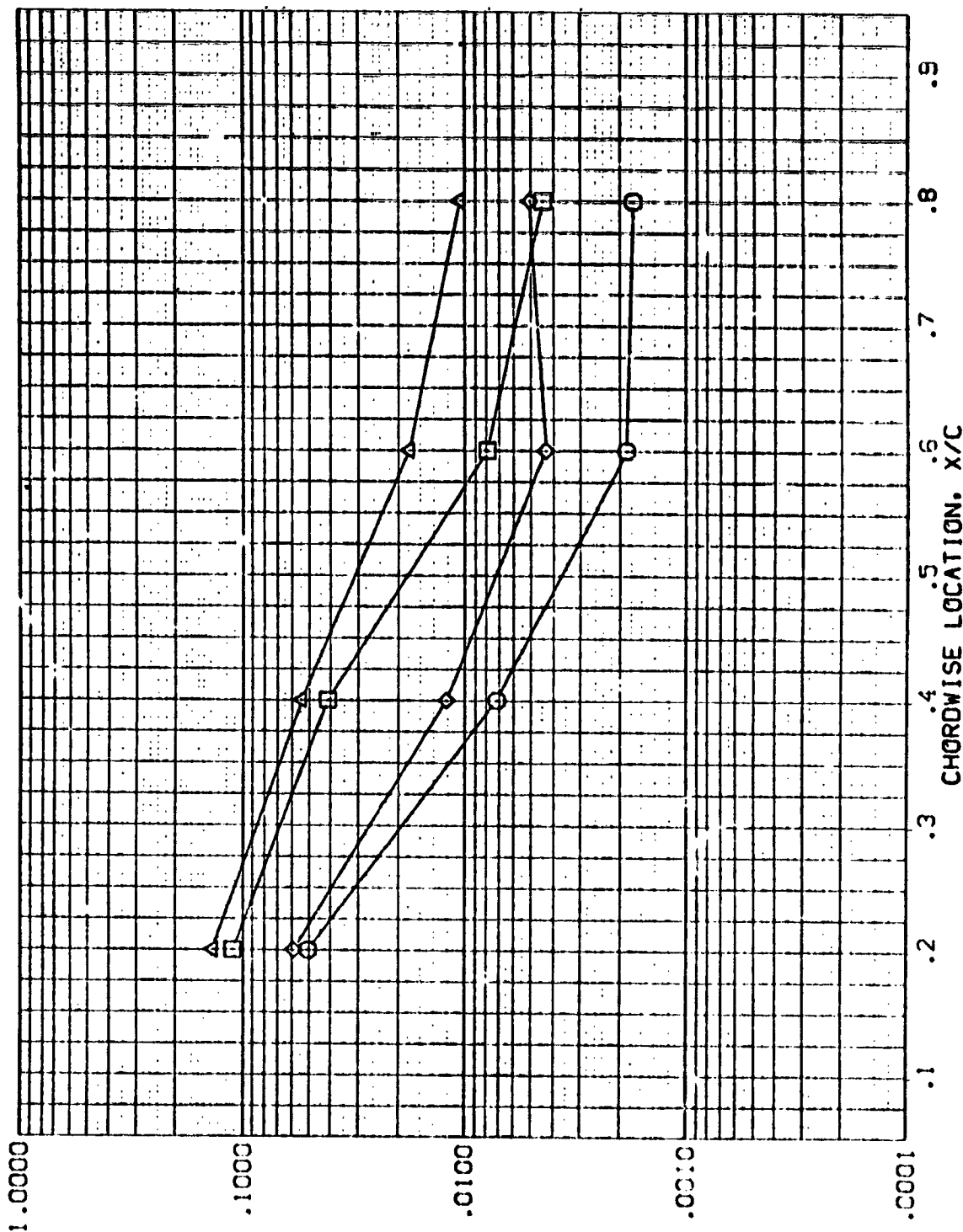


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = 800

DATA SET SYMBOL: CONFIGURATION DESCRIPTION ALPHA BETA RN/L
 (REV002) AMES 3.5-195 [H28 01+T] WING UPPER SURFACE 30.000 0.000 1.000
 (REV012) AMES 3.5-195 [H28 01+T] WING UPPER SURFACE 30.000 -5.000 1.000

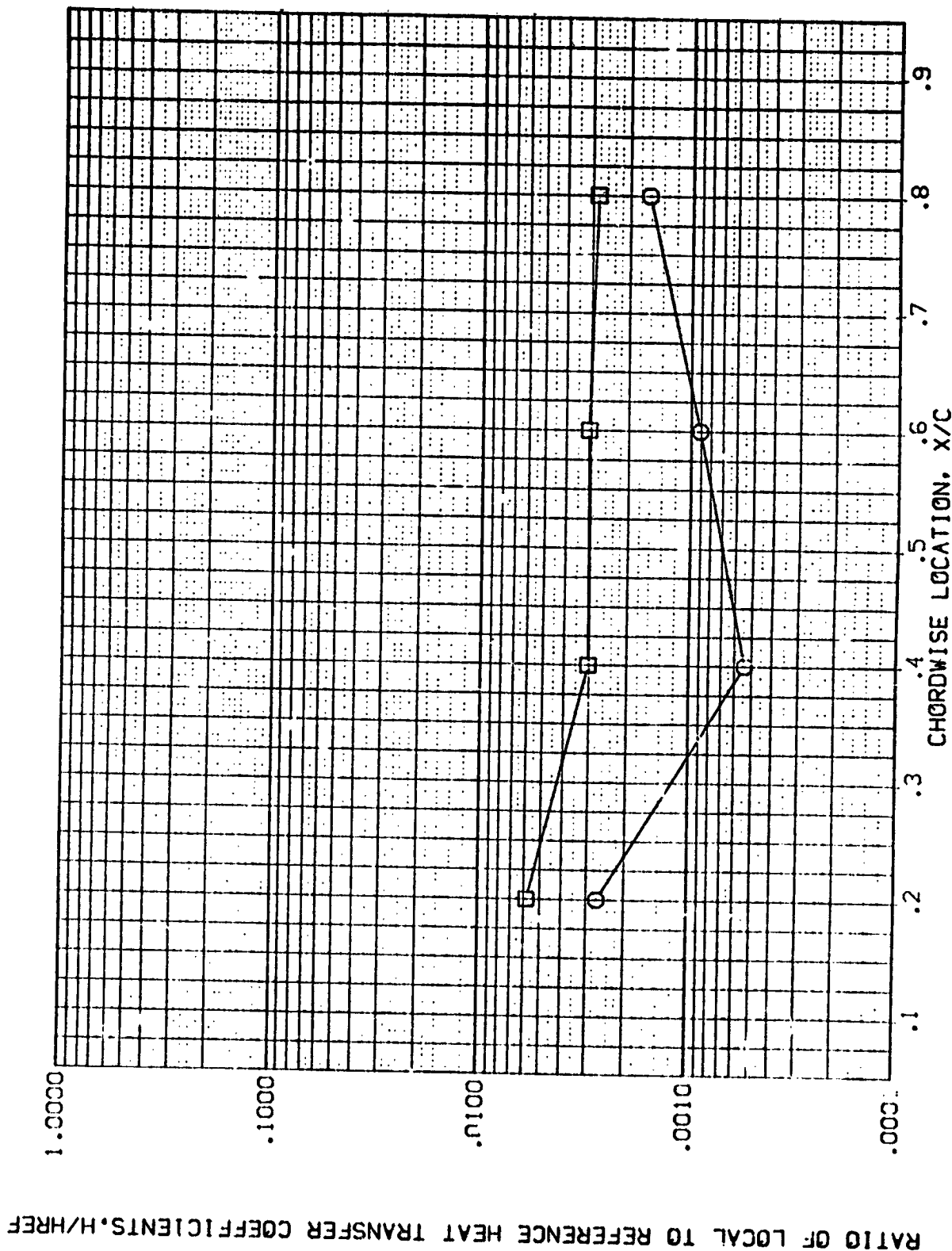


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .400

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (REV002) B ANES 3-S-195 (H28 01+T1) WING UPPER SURFACE
 (REV012) B ANES 3-S-195 (H28 01+T1) WING UPPER SURFACE

ALPHA BETA RW/L
 30.000 .000 1.000
 30.000 -5.000 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

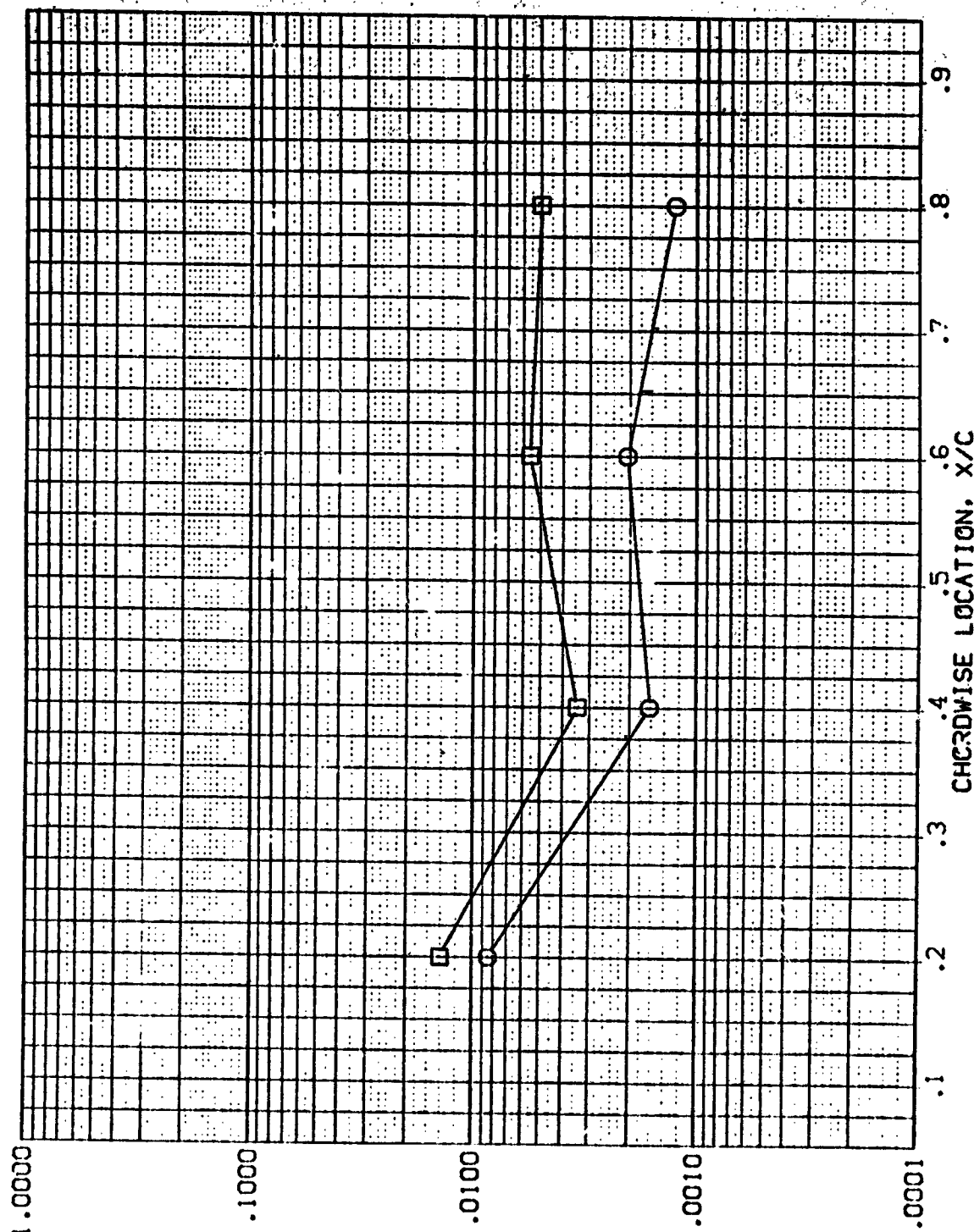


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 2Y/B = .600

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALP-A BETA RN/L
 (REVGOZ) AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE 30.000 .000 1.000
 (REVG12) AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE 30.000 -5.000 1.000

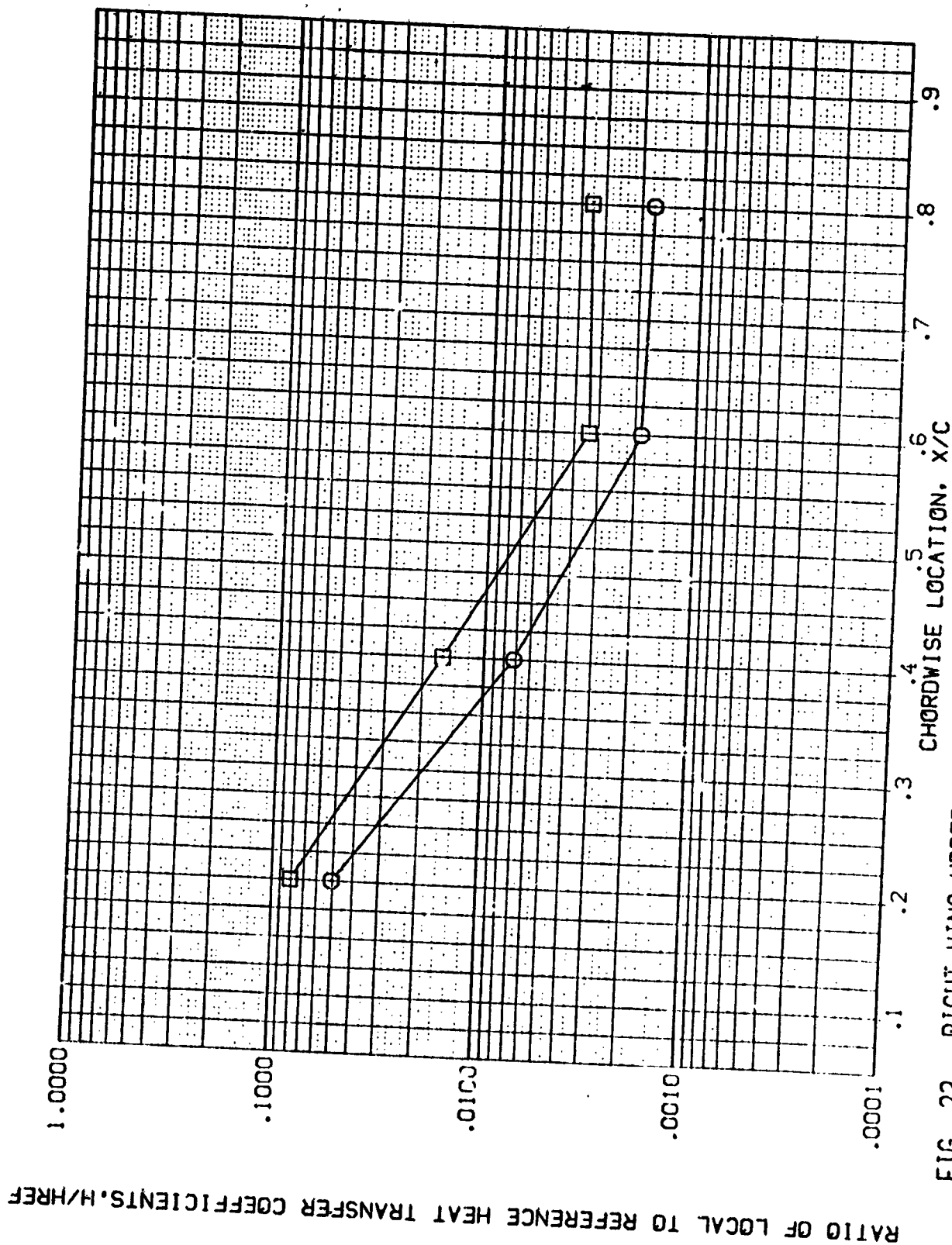


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

$MACH = 5.300$ $H_A/H_T = .900$ $2Y/B = .800$

DATA SET SYMBOL
 (REVCO1)
 (REVCO2)
 (REVCO3)
 (REVCO4)
 (REVCO5)

CONFIGURATION DESCRIPTION
 ARES 3.5-195 1428 01+11 WING UPPER SURFACE
 ARES 3.5-195 1428 01+11 WING UPPER SURFACE
 ARES 3.5-195 1428 01+11 WING UPPER SURFACE
 ARES 3.5-195 1428 01+11 WING UPPER SURFACE
 ARES 3.5-195 1428 01+11 WING UPPER SURFACE

ALPHA BETA RM/L
 .000 .000 1.000
 30.000 .000 1.000
 60.000 .000 1.000
 90.000 .000 1.000
 120.000 .000 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

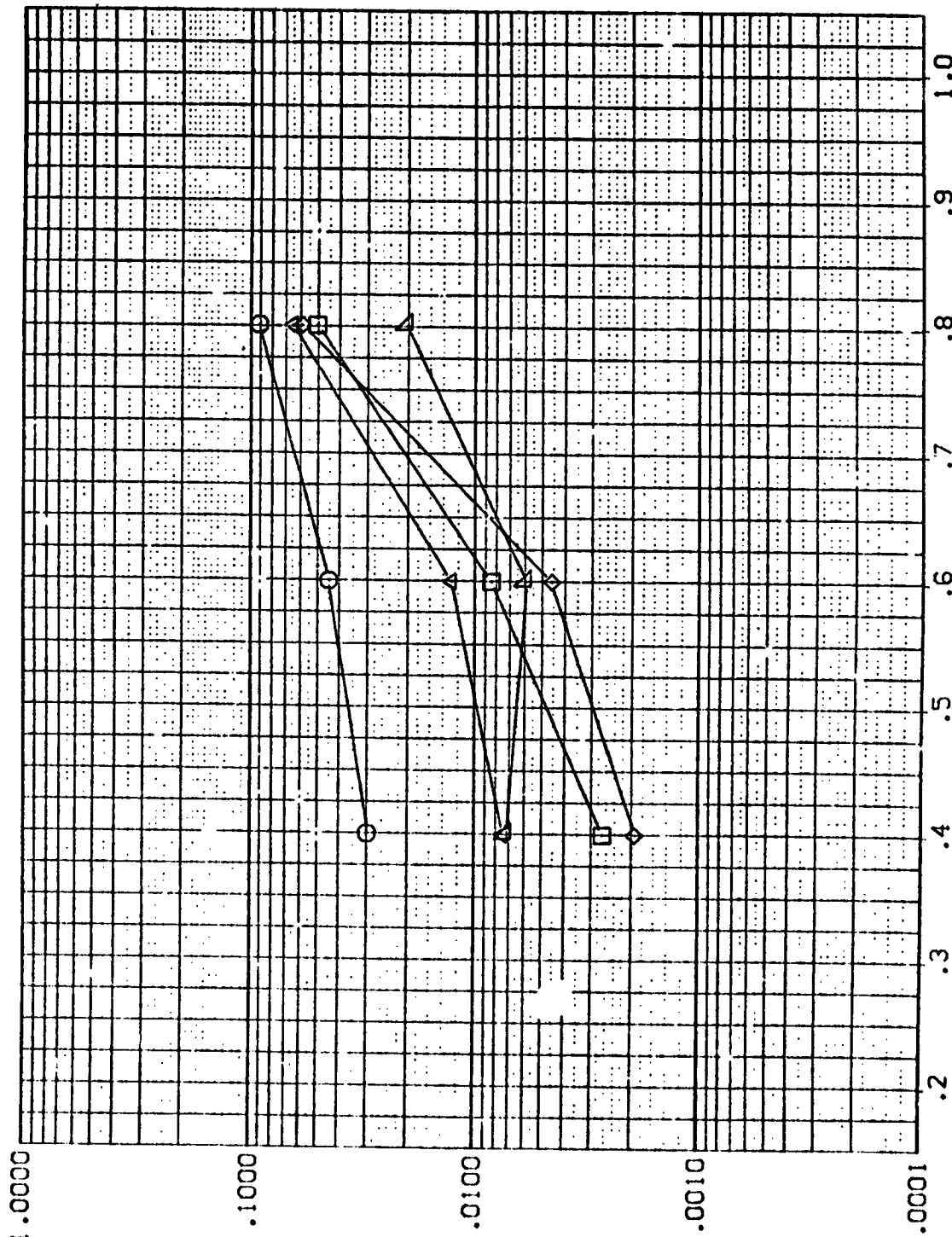


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .200

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

AMES 3.5-195 [H28 01+T1] WING UPPER SURFACE
 AMES 3.5-195 [H28 01+T1] WING UPPER SURFACE
 AMES 3.5-195 [H28 01+T1] WING UPPER SURFACE
 AMES 3.5-195 [H28 01+T1] WING UPPER SURFACE

ALPHA BETA RV/L
 .000 .000 1.000
 30.000 .000 1.000
 60.000 .000 1.000
 90.000 .000 1.000
 120.000 .000 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

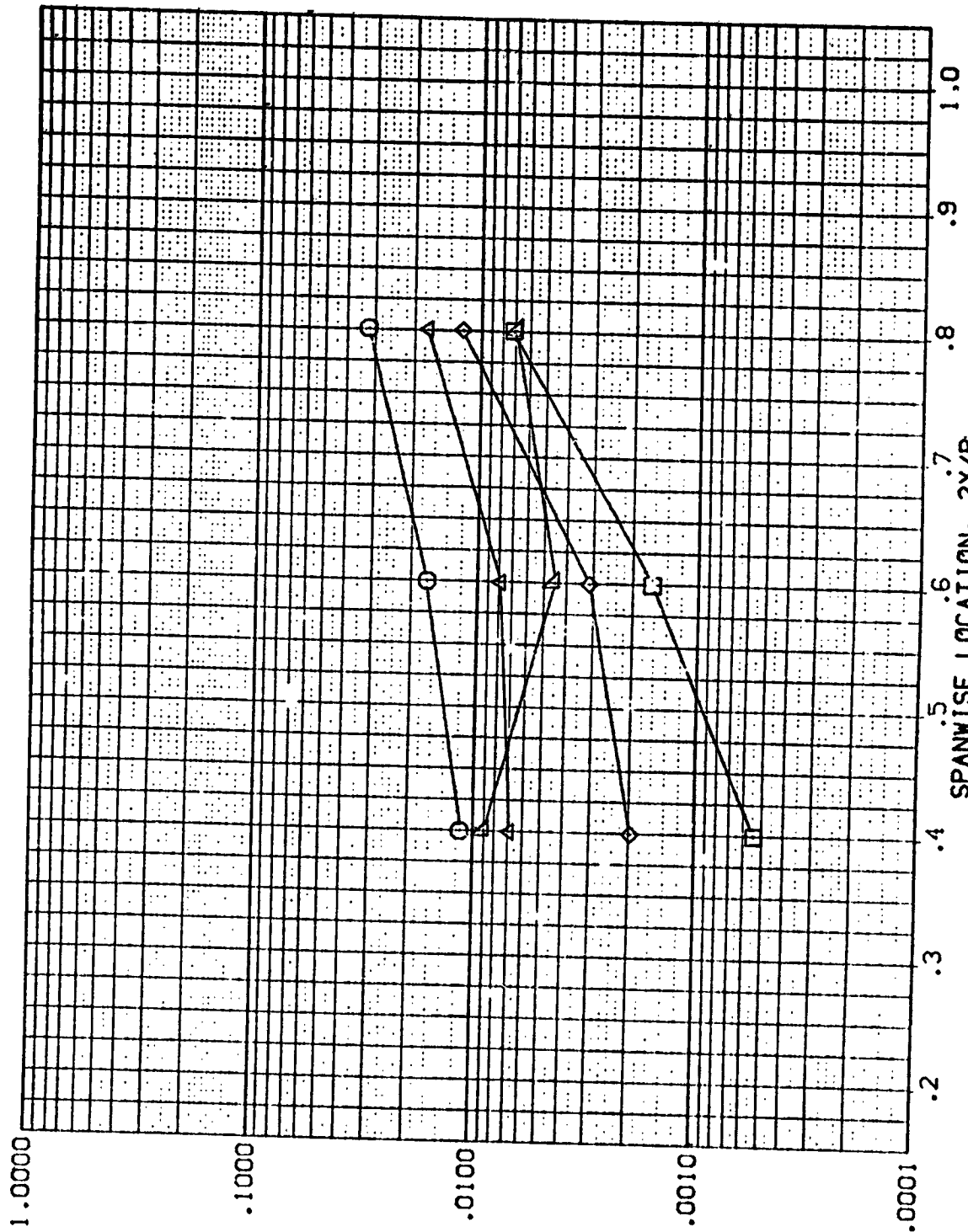


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .400

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(REVGO1)	AVES 3.5-195	IM28	CI+TI	WING	UPPER SURFACE
(REVGO2)	AVES 3.5-195	IM28	CI+TI	WING	UPPER SURFACE
(REVGO3)	AVES 3.5-195	IM28	CI+TI	WING	UPPER SURFACE
(REVGO4)	AVES 3.5-195	IM28	CI+TI	WING	UPPER SURFACE
(REVGO5)	AVES 3.5-195	IM28	CI+TI	WING	UPPER SURFACE

ALPHA BETA RN/L

.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
90.000	.000	1.000
120.000	.000	1.000

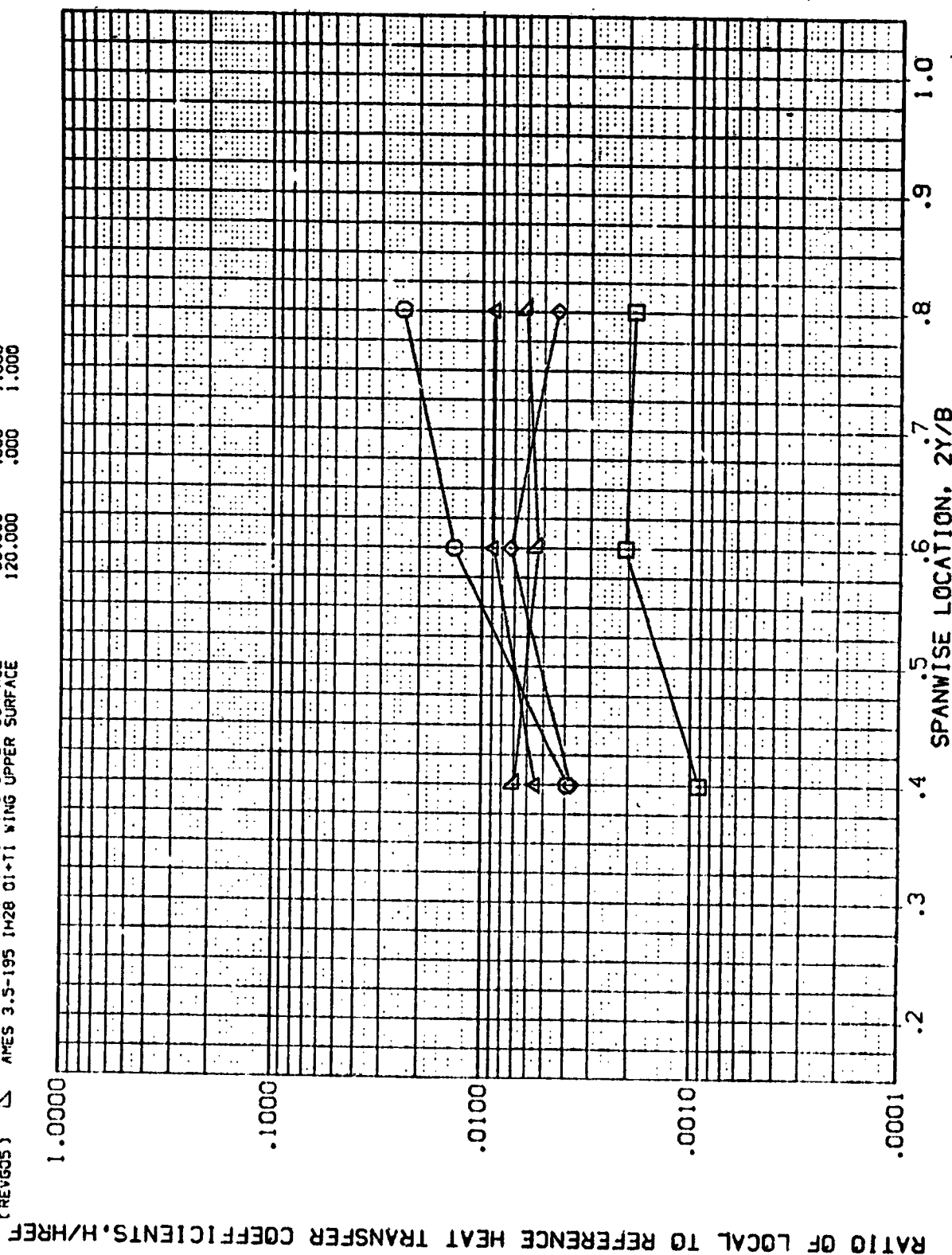


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .600

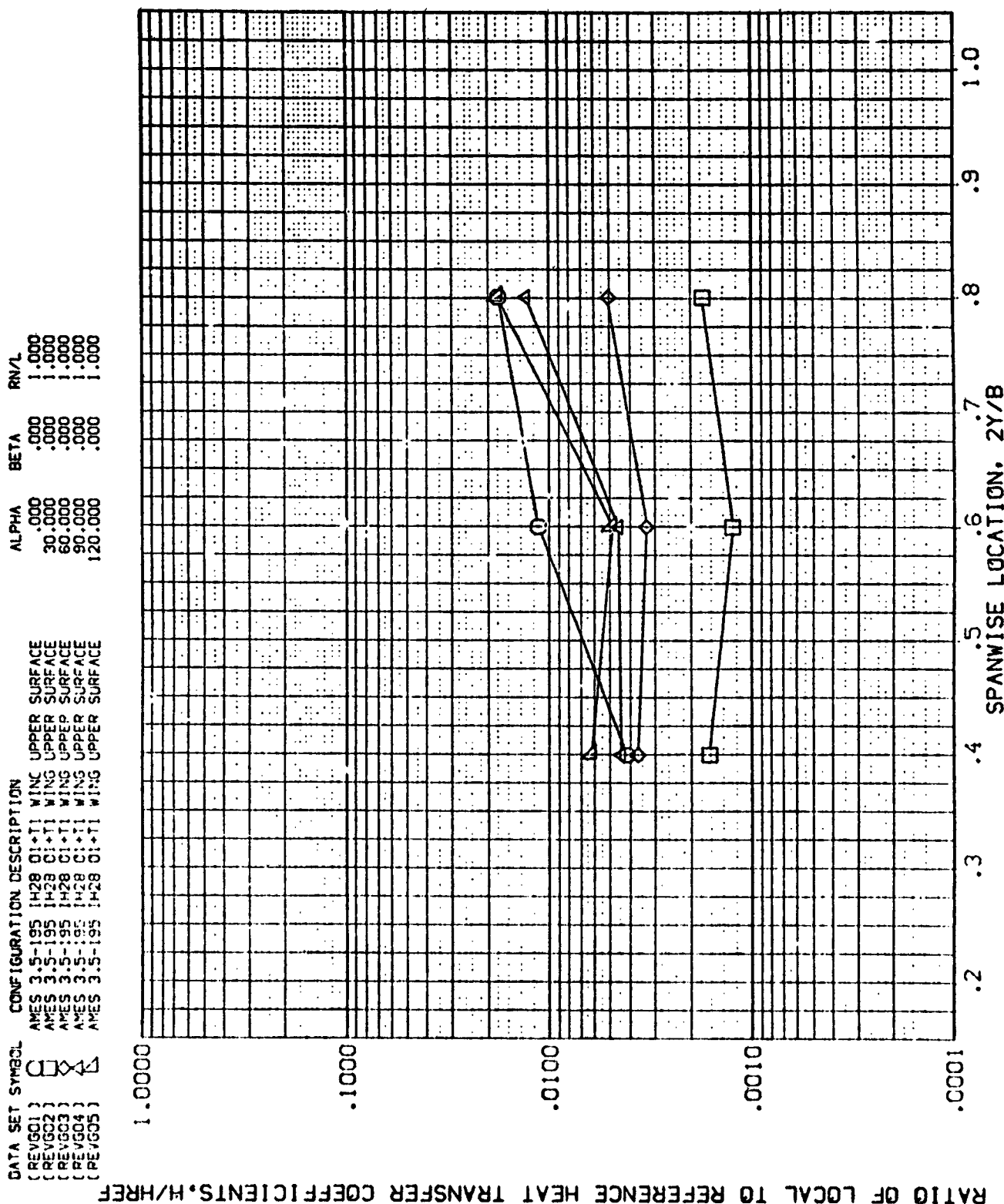


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 $h_{AW}/h_T = .900$ $x/c = .800$

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

DATA SET SYMBOL CONFIGURATION DESCRIPTION

REVG01
REVG09
REVG09
REVG07
REVG06

AMES 3.5-195 1428 01+11 WING UPPER SURFACE
AMES 3.5-195 1428 01+11 WING UPPER SURFACE
AMES 3.5-195 1428 01+11 WING UPPER SURFACE
AMES 3.5-195 1428 01+11 WING UPPER SURFACE
AMES 3.5-195 1428 01+11 WING UPPER SURFACE

ALPHA BETA RV/L
.000 .000 1.000
-30.000 .000 1.000
-60.000 .000 1.000
-90.000 .000 1.000
-120.000 .000 1.000

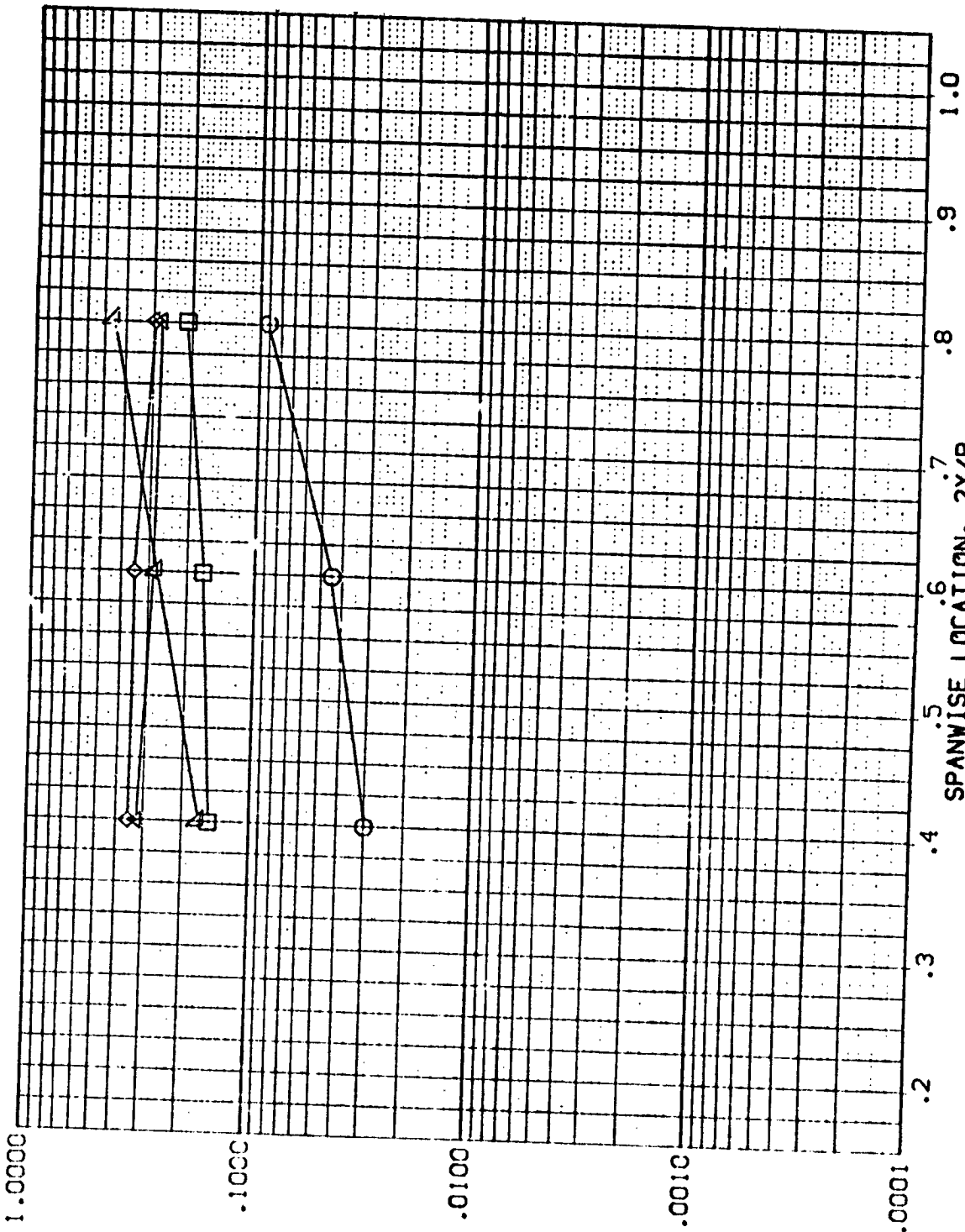


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = 200

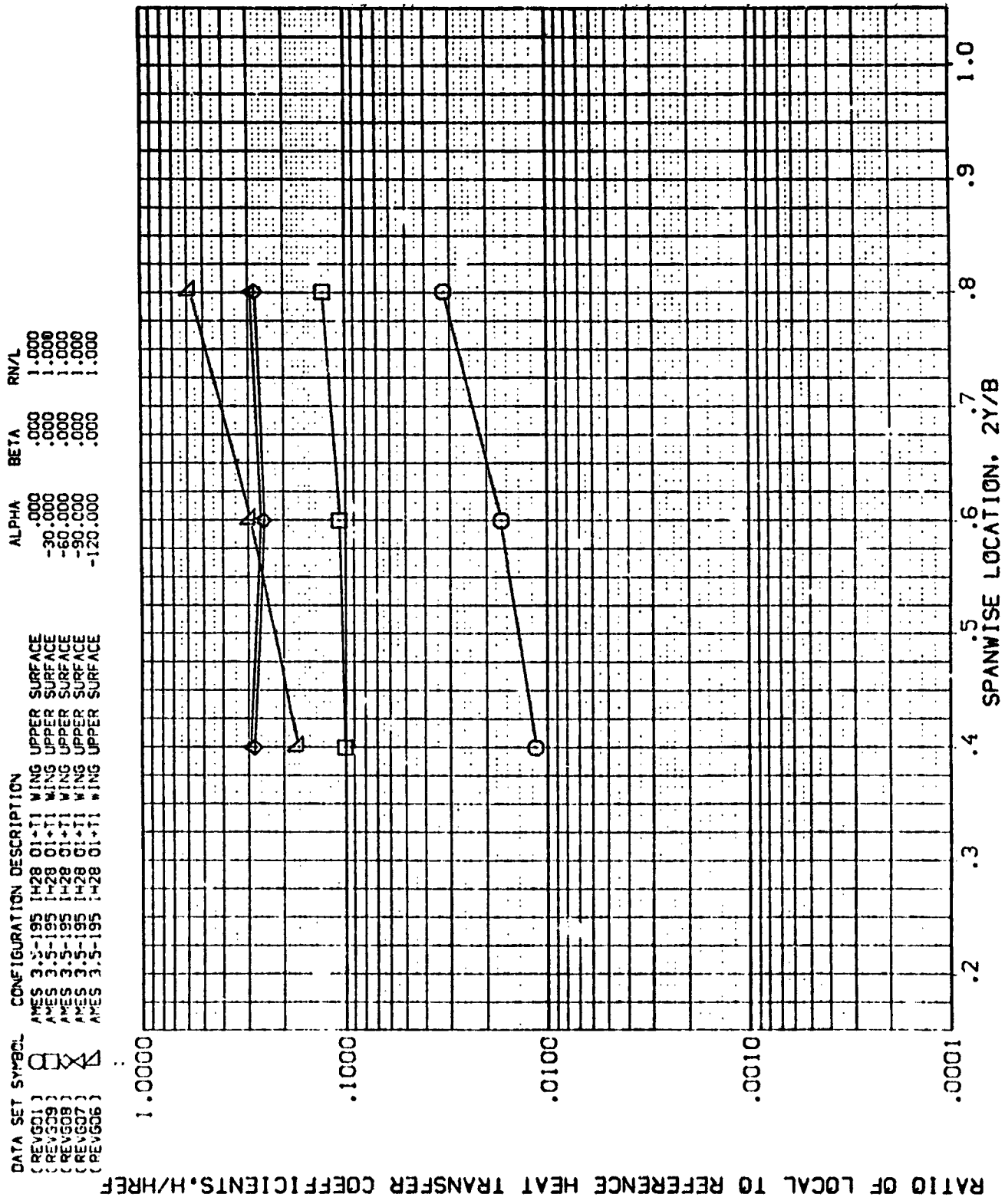


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REV601)	AVES 3.5-195 I-28 01+11 WING UPPER SURFACE	.000	.000	1.000
(REV609)	AVES 3.5-195 I-28 01+11 WING UPPER SURFACE	-30.000	.000	1.000
(REV608)	AVES 3.5-195 I-28 01+11 WING UPPER SURFACE	-60.000	.000	1.000
(REV607)	AVES 3.5-195 I-28 01+11 WING UPPER SURFACE	-90.000	.000	1.000
(REV606)	AVES 3.5-195 I-28 01+11 WING UPPER SURFACE	-120.000	.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

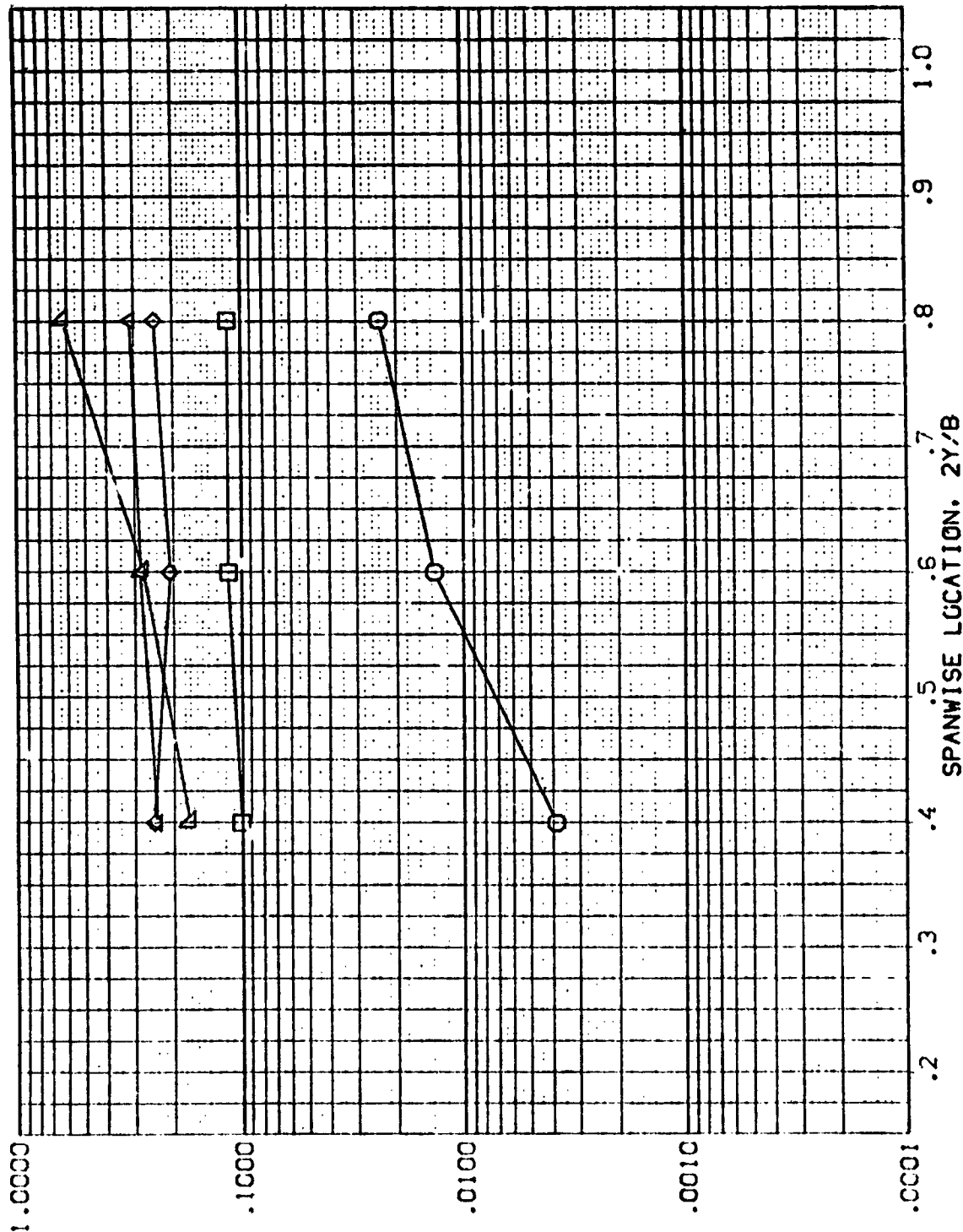


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HA_W/HT = .900 X/C = .500

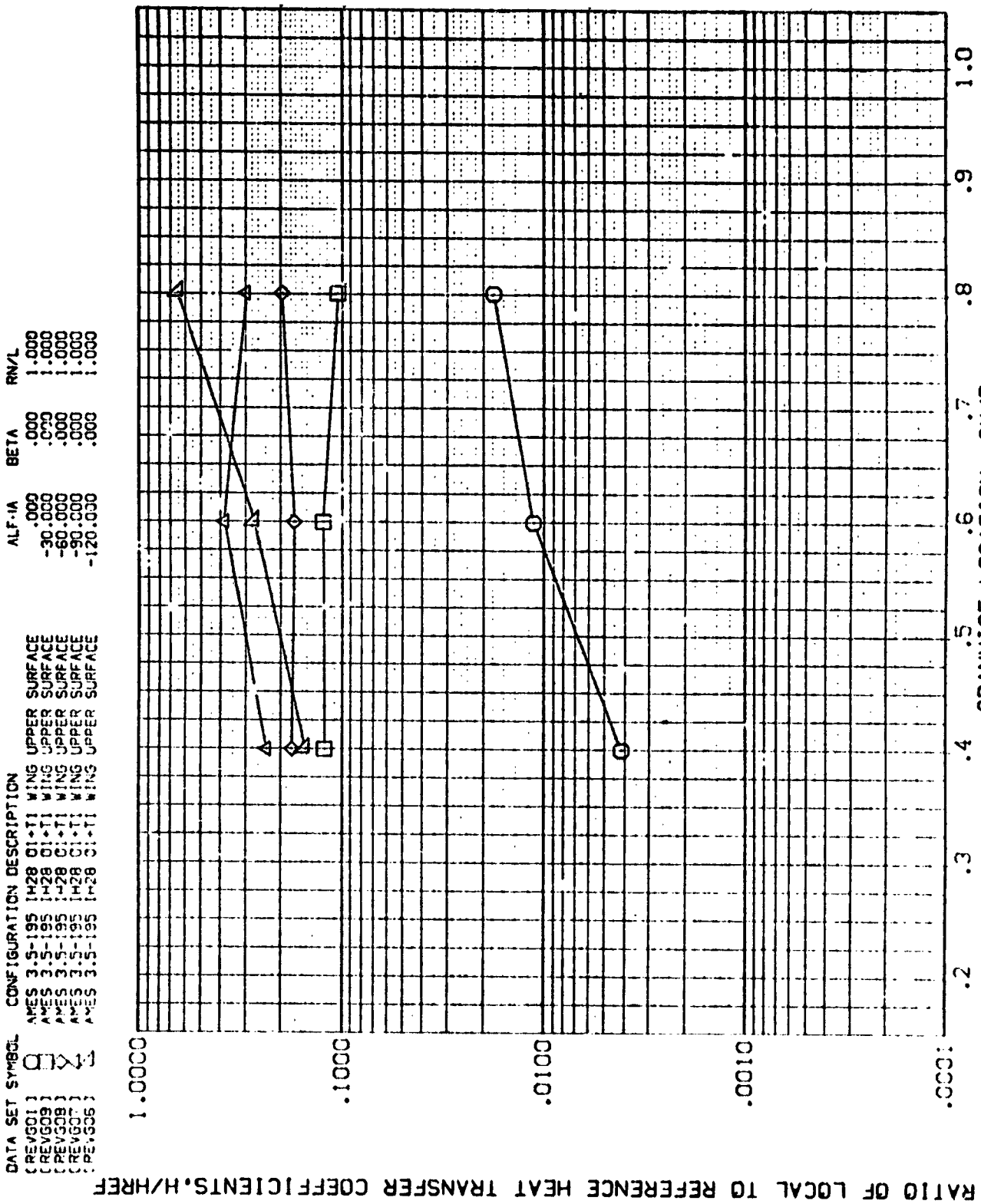


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

DATA SET SYMBOL: 1000
 (REV 02)
 (REV 01)
 (REV 00)
 (REV 00)
 (REV 00)

CONFIGURATION DESCRIPTION

AMES 3-5-195 [H28 01+T] WING UPPER SURFACE
 AMES 3-5-195 [H28 01+T] WING UPPER SURFACE
 AMES 3-5-195 [H28 01+T] WING UPPER SURFACE
 AMES 3-5-195 [H28 01+T] WING UPPER SURFACE

ALPHA BETA RV/L
 30.000 .000 1.000
 30.000 .000 4.000
 60.000 .000 1.000
 60.000 .000 4.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

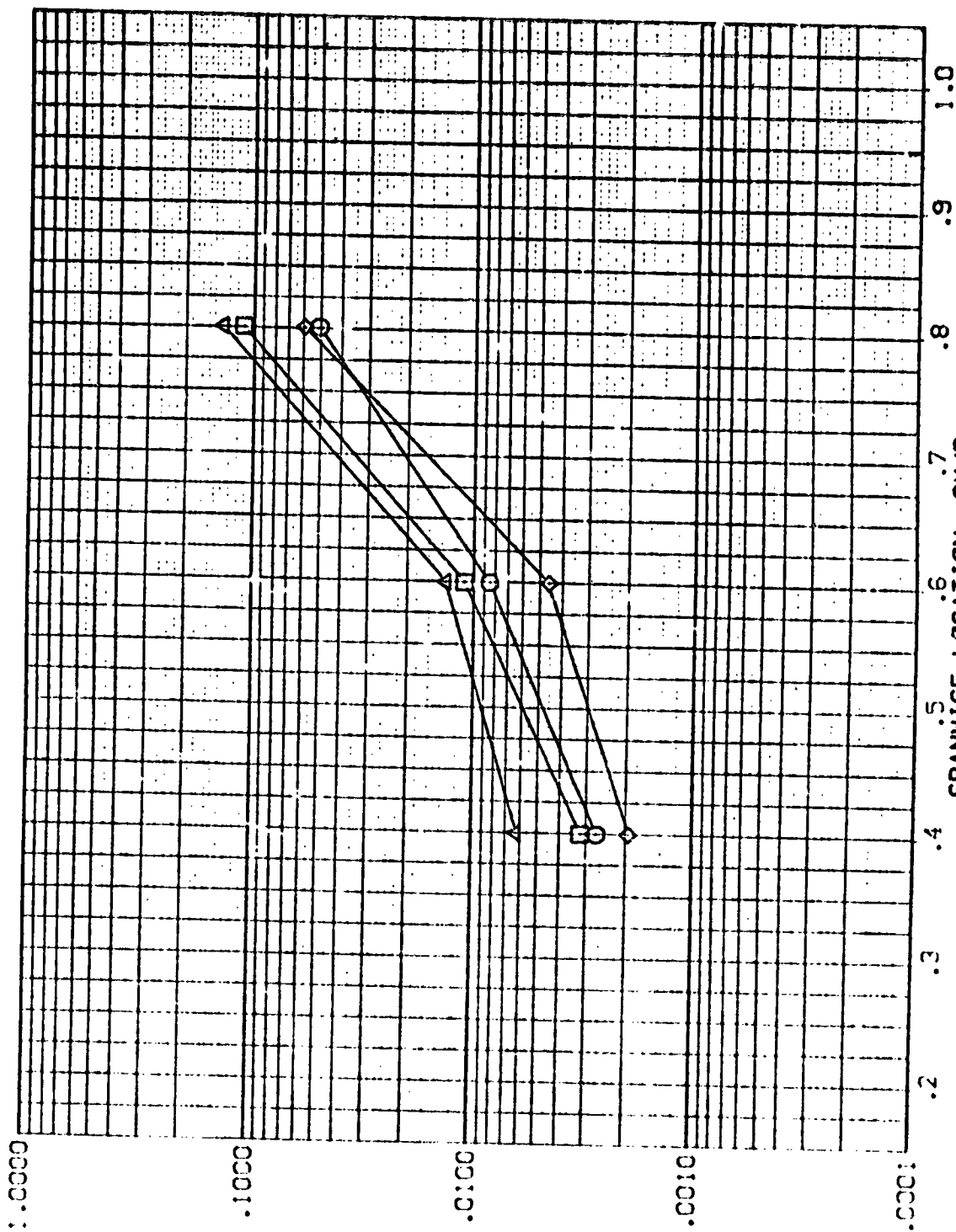


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 $H_A/H_T = .900$ $X/C = .200$ REPRODUCTION PAGE 1100

ORIGINAL PAGE IS

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (REV002) ASES 3-5-195 1428 01+11 WING UPPER SURFACE
 (REV003) ASES 3-5-195 1428 01+11 WING UPPER SURFACE
 (REV003) ASES 3-5-195 1428 01+11 WING UPPER SURFACE
 (REV003) ASES 3-5-195 1428 01+11 WING UPPER SURFACE

ALPHA BETA RV/L
 30.000 .000 1.000
 30.000 .000 4.000
 60.000 .000 1.000
 60.000 .000 4.000

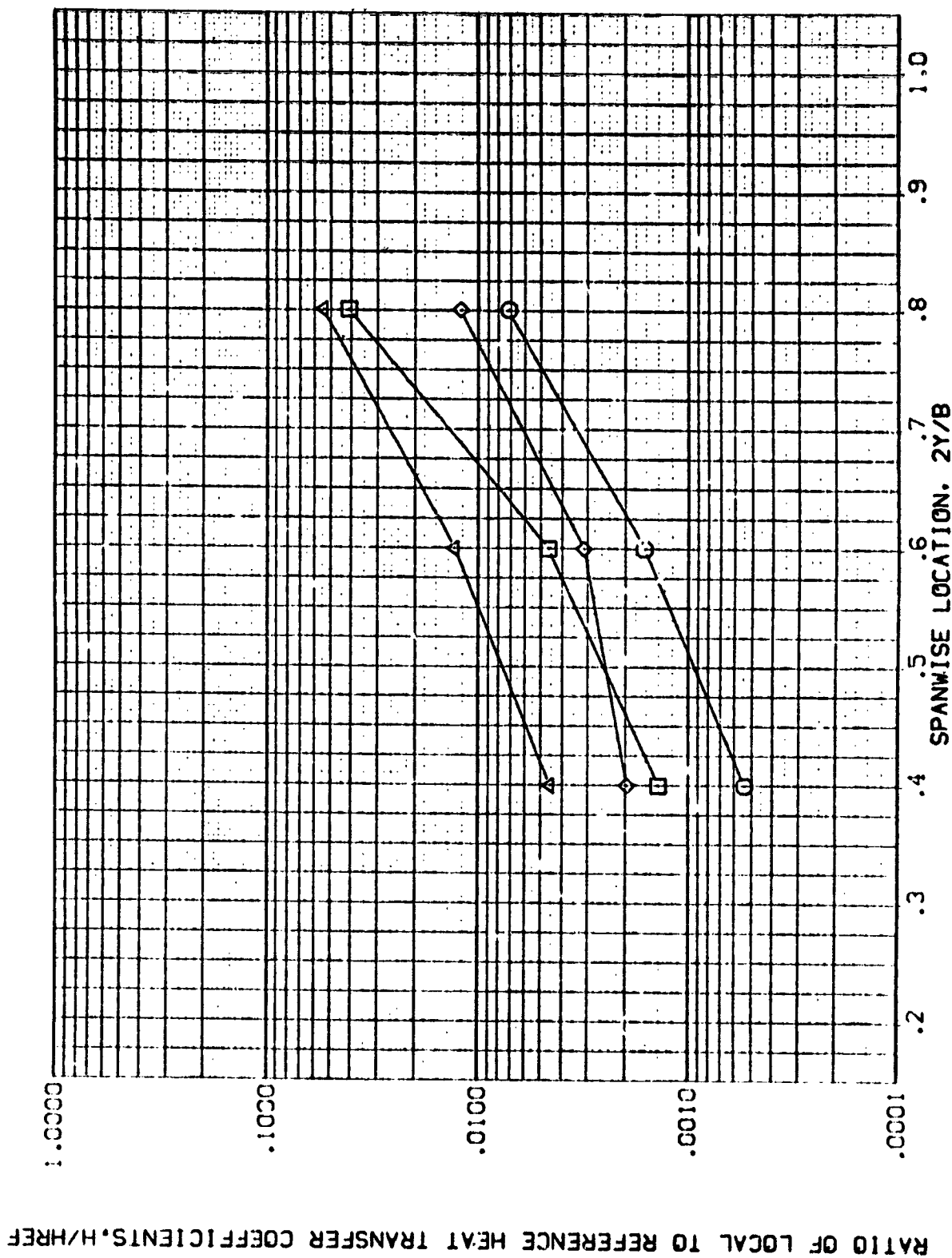


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .400

DATA SET SYMB.
 (REV 302) X
 (REV 301) X
 (REV 300) X
 (REV 299) X

CONFIGURATION DESCRIPTION
 AYES 3.5-195 :H28 01+11 WING
 AYES 3.5-195 :H28 01+11 WING
 AYES 3.5-195 :H28 01+11 WING
 AYES 3.5-195 :H28 01+11 WING

UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE

ALPHA BETA RV/L
 30.000 .000 1.000
 30.000 .000 4.000
 60.000 .000 1.000
 60.000 .000 4.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HR/LF

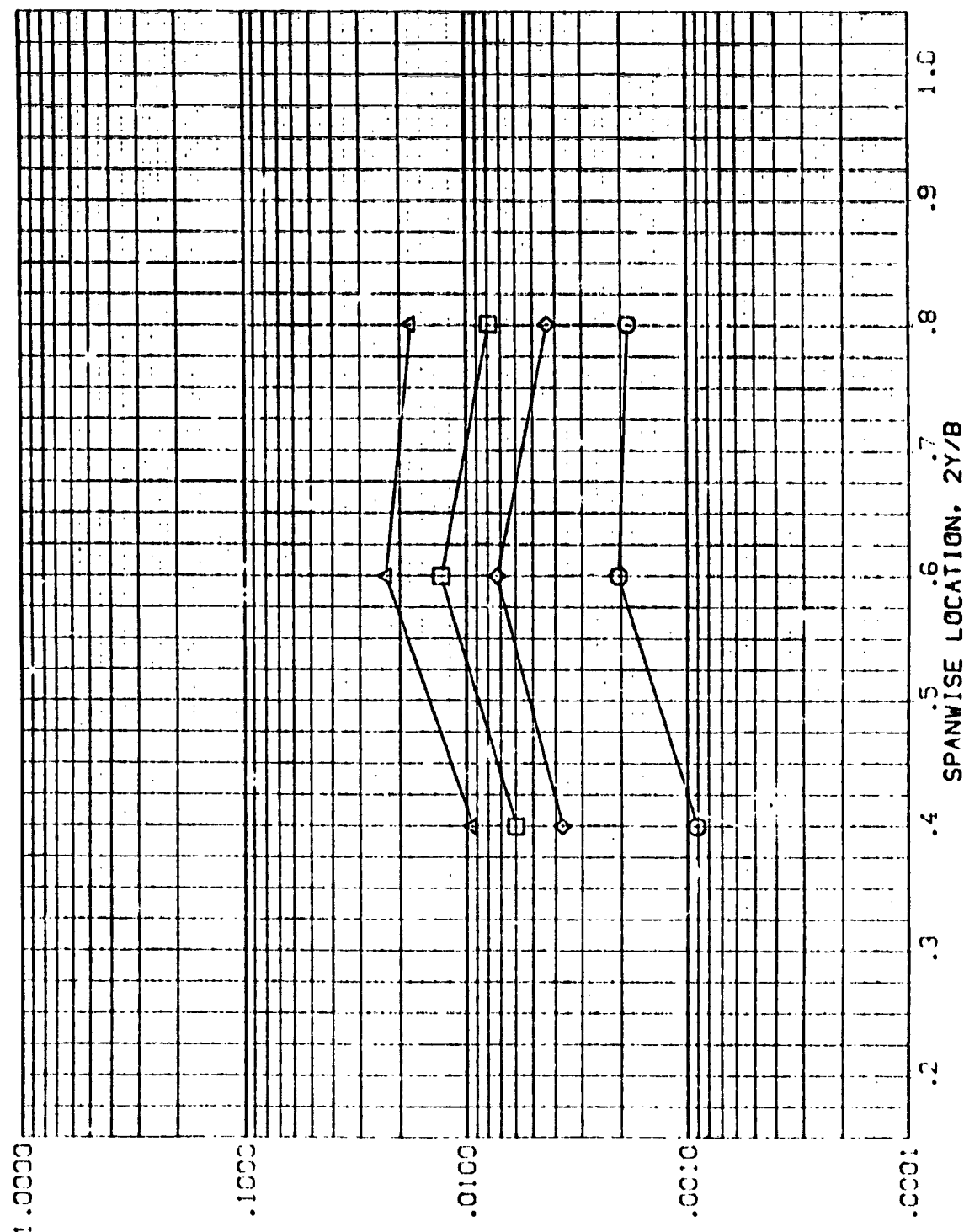


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .600

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REV602)	AMES 3.5-195 [H28 Q1+T1] WING UPPER SURFACE	30.000	.000	1.000
(REV611)	AMES 3.5-195 [H28 Q1+T1] WING UPPER SURFACE	30.000	.000	4.000
(REV603)	AMES 3.5-195 [H28 Q1+T1] WING UPPER SURFACE	60.000	.000	1.000
(REV610)	AMES 3.5-195 [H28 Q1+T1] WING UPPER SURFACE	60.000	.000	4.000

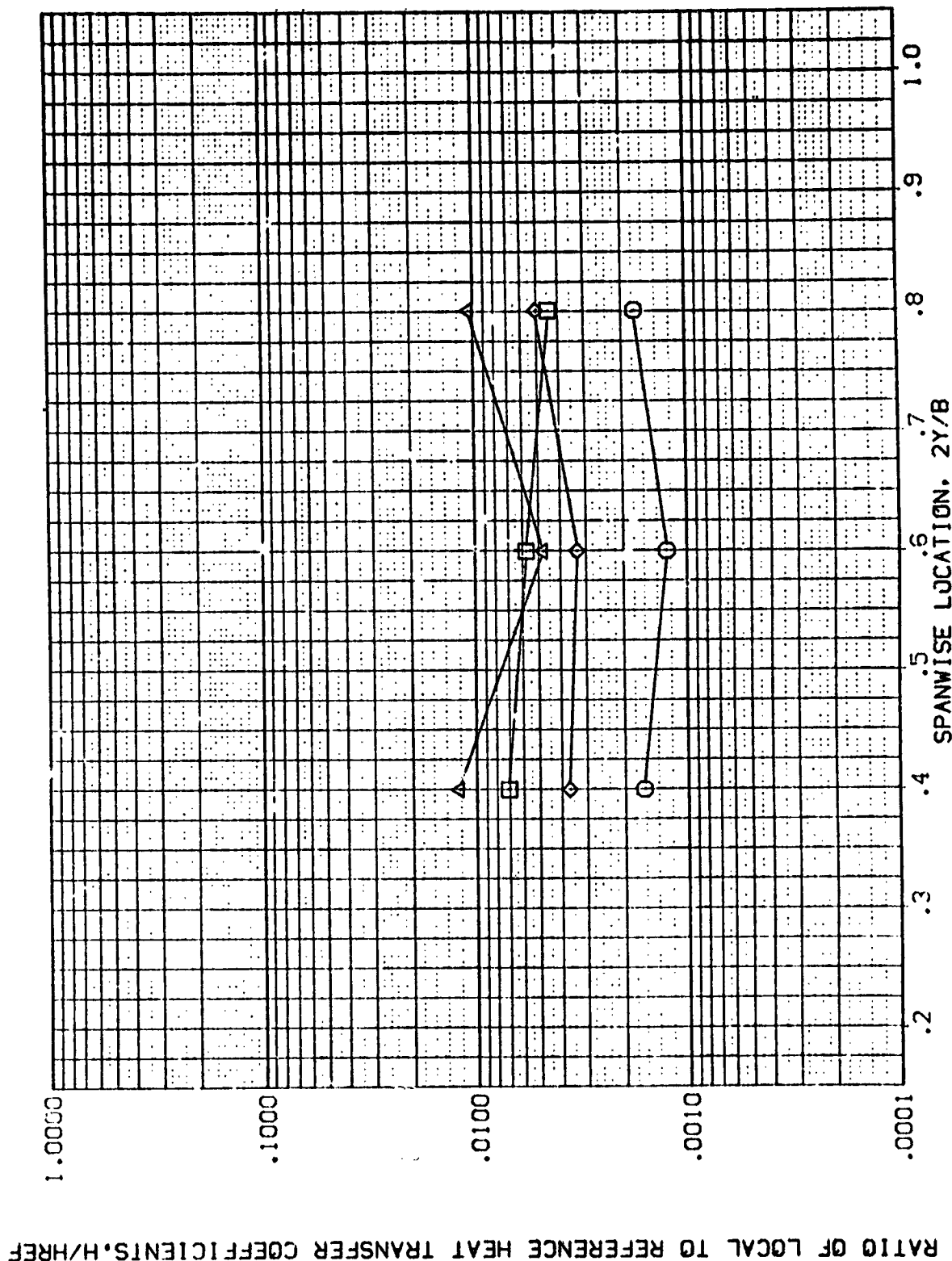


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .900

DATA SET SYMBOL: **B** CONFIGURATION DESCRIPTION
 AMES 3.5-195 [H28 01+1] WING UPPER SURFACE
 AMES 3.5-195 [H28 01+1] WING UPPER SURFACE
 (REV:12)

ALPHA BETA RV/L
 30.000 0.000 1.000
 30.000 -5.000 1.000

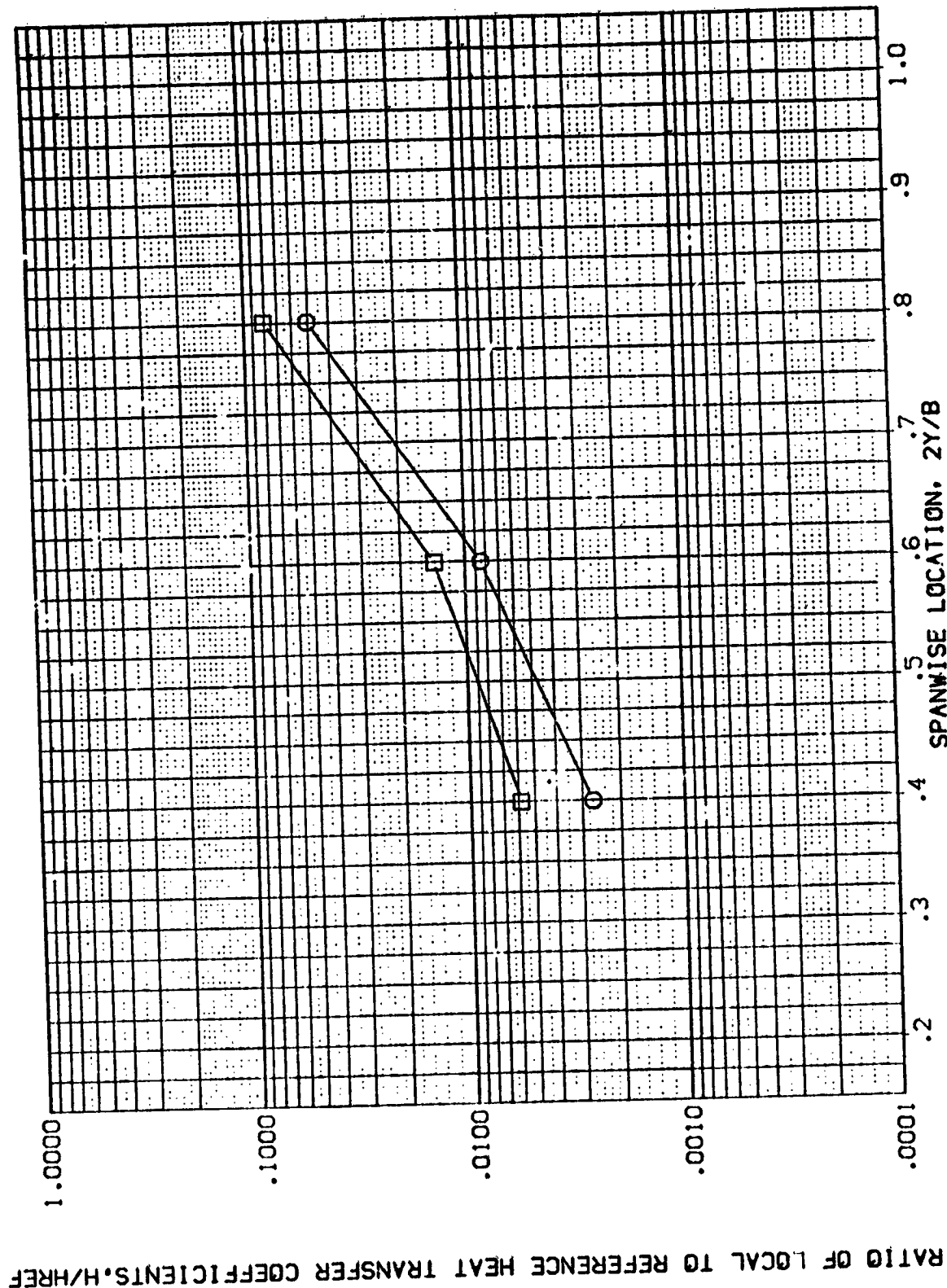



FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .200

DATA SET SYMBOL (REV02) (REVG12)  CONFIGURATION DESCRIPTION AMES 3.5-195 (H28 01+T1) WING UPPER SURFACE ALPHA 30.000 BETA .000 RV/L 1.000 AMES 3.5-195 (H28 01+T1) WING UPPER SURFACE ALPHA 30.000 BETA -5.000 RV/L 1.000

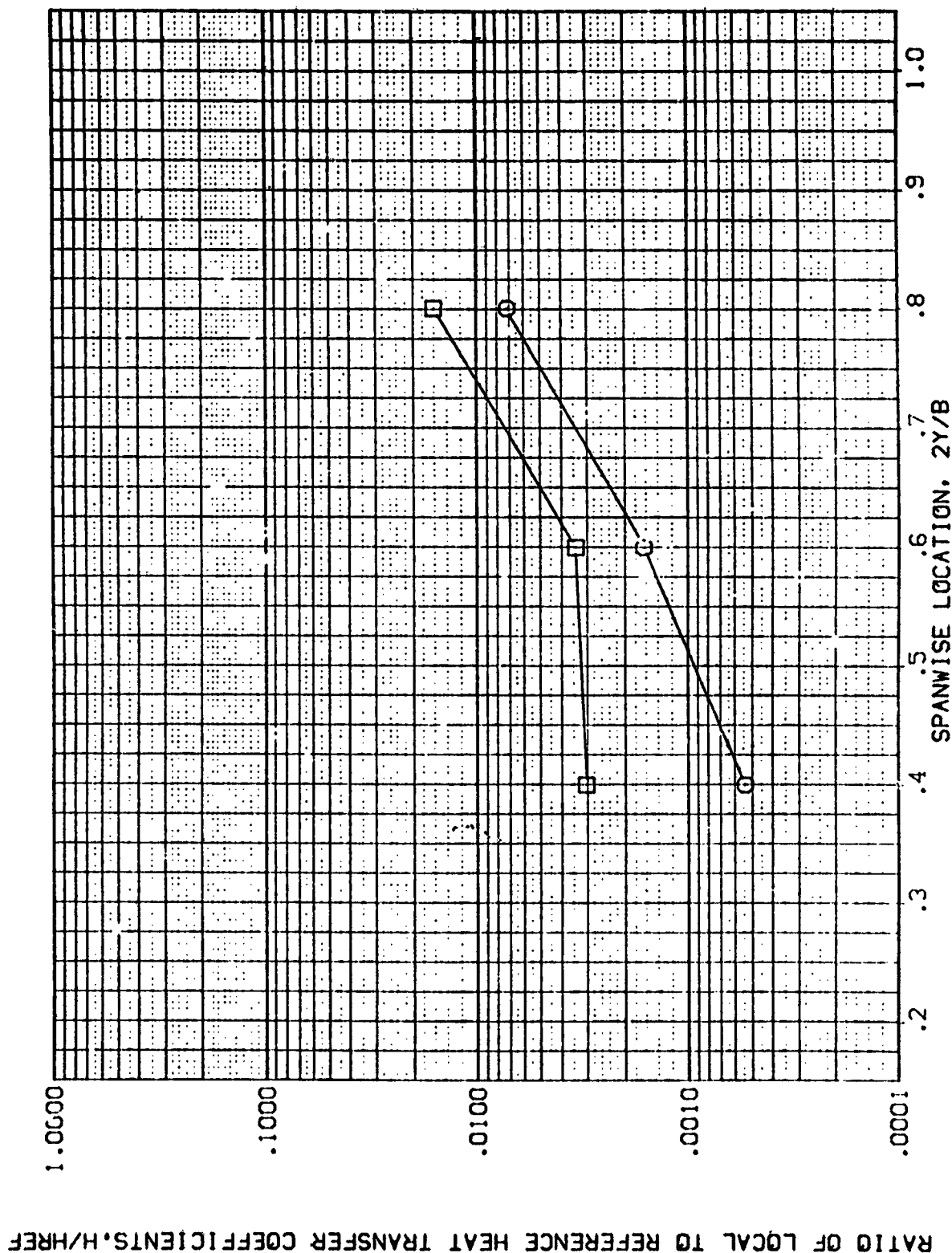


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .400

DATA SET SYMBOL
(REV502) 9
(REV512)

CONFIGURATION DESCRIPTION
AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE
AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

ALPHA BETA RN/L
30.000 .000 1.000
30.000 -5.000 1.000

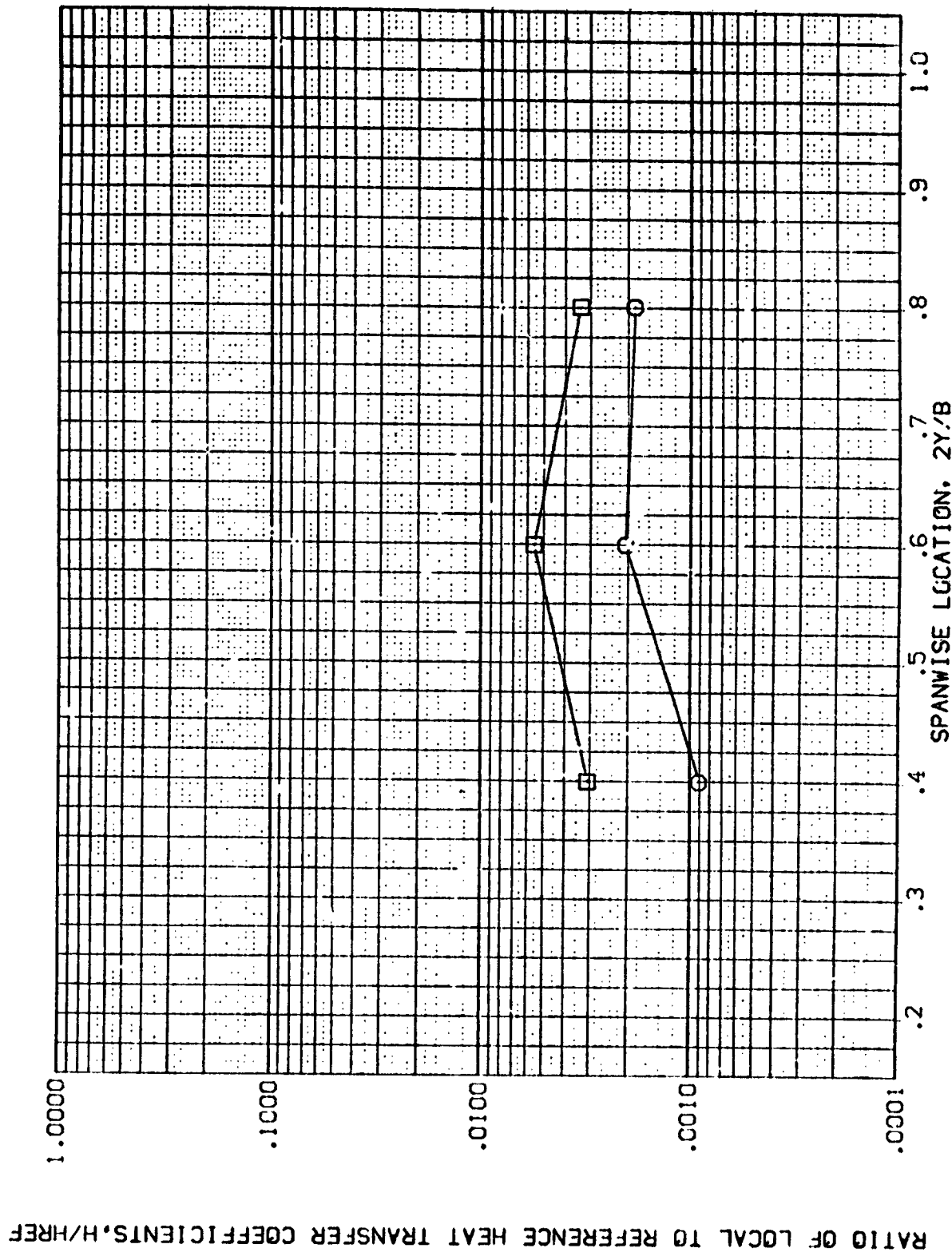


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .300

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA BETA RN/L
 (REVGG2) AMES 3.5-195 I+28 OI+T1 WING UPPER SURFACE 30.000 .000 1.000
 (REVGI2) AMES 3.5-195 I+28 OI+T1 WING UPPER SURFACE 30.000 -5.000 1.000

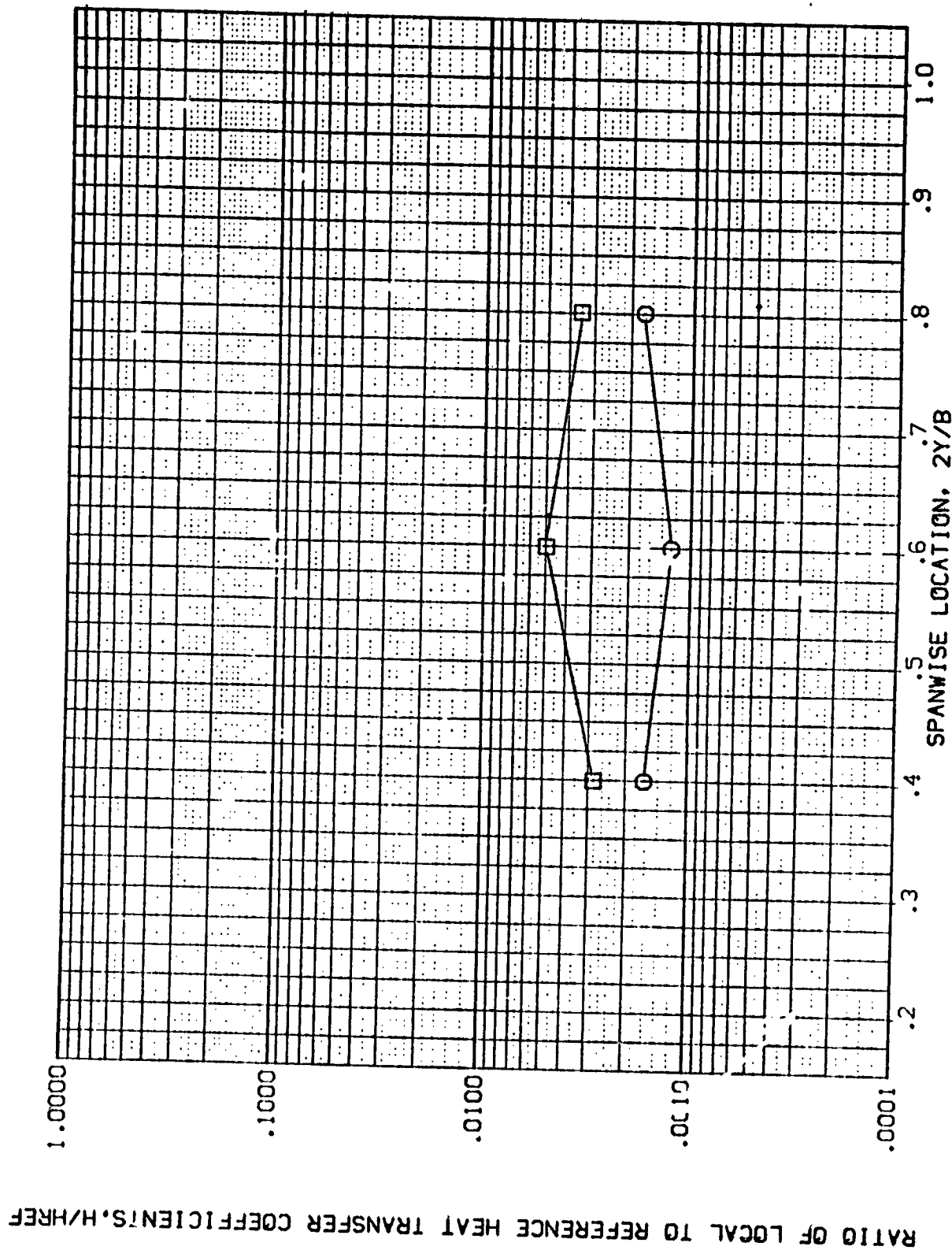


FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 X/C = .800

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG02)

SYMBOL

2 γ /B

MAN/HT

MACH

5.219

PARAMETRIC VALUES

ALPHA

30.000

BETA

1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

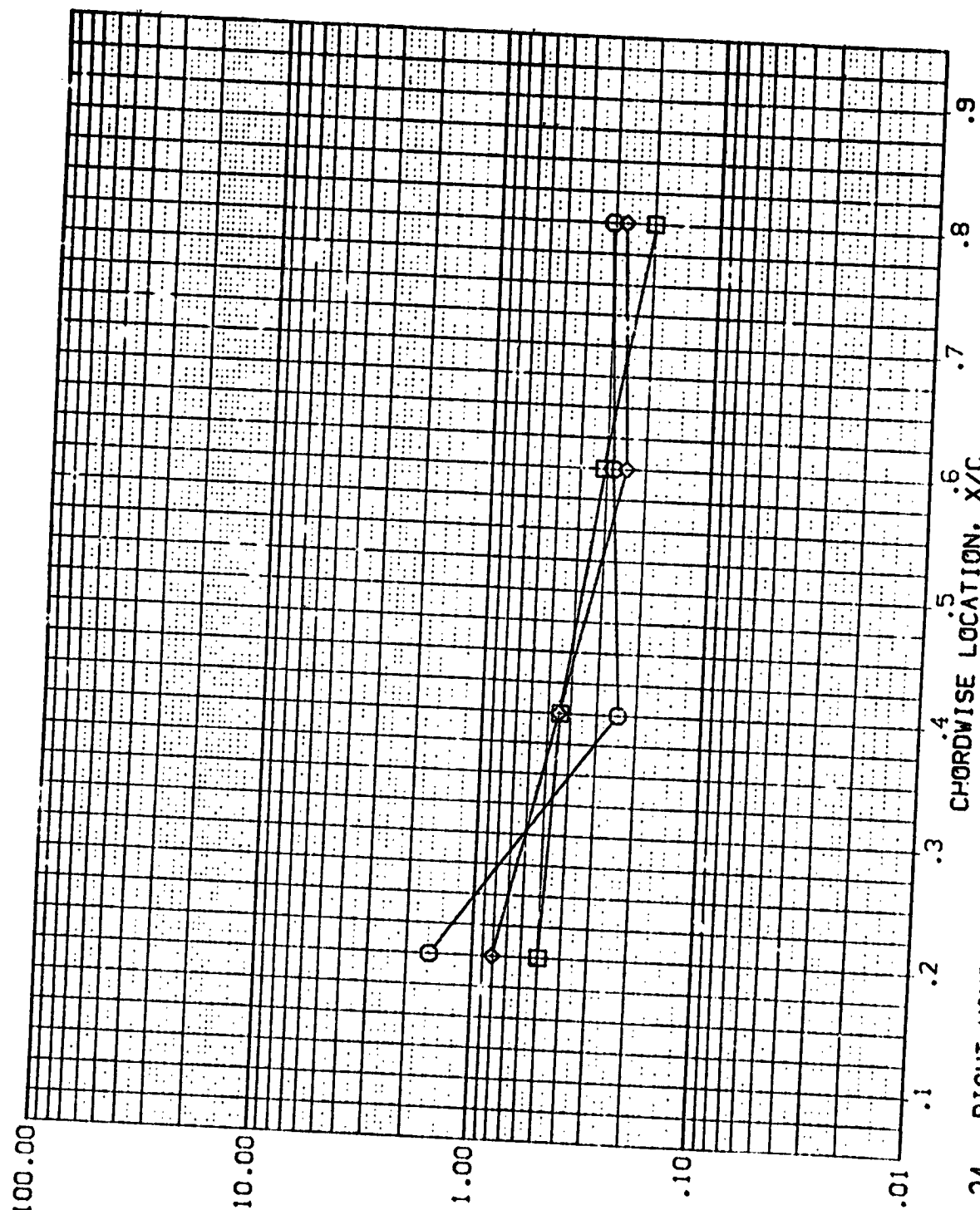


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG03)

SYMBOL 2Y/B .400
 .600
 .800

HAW/HT .900 MACH 5.220

PARAMETRIC VALUES
 ALPHA 60.000 BETA .000
 RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

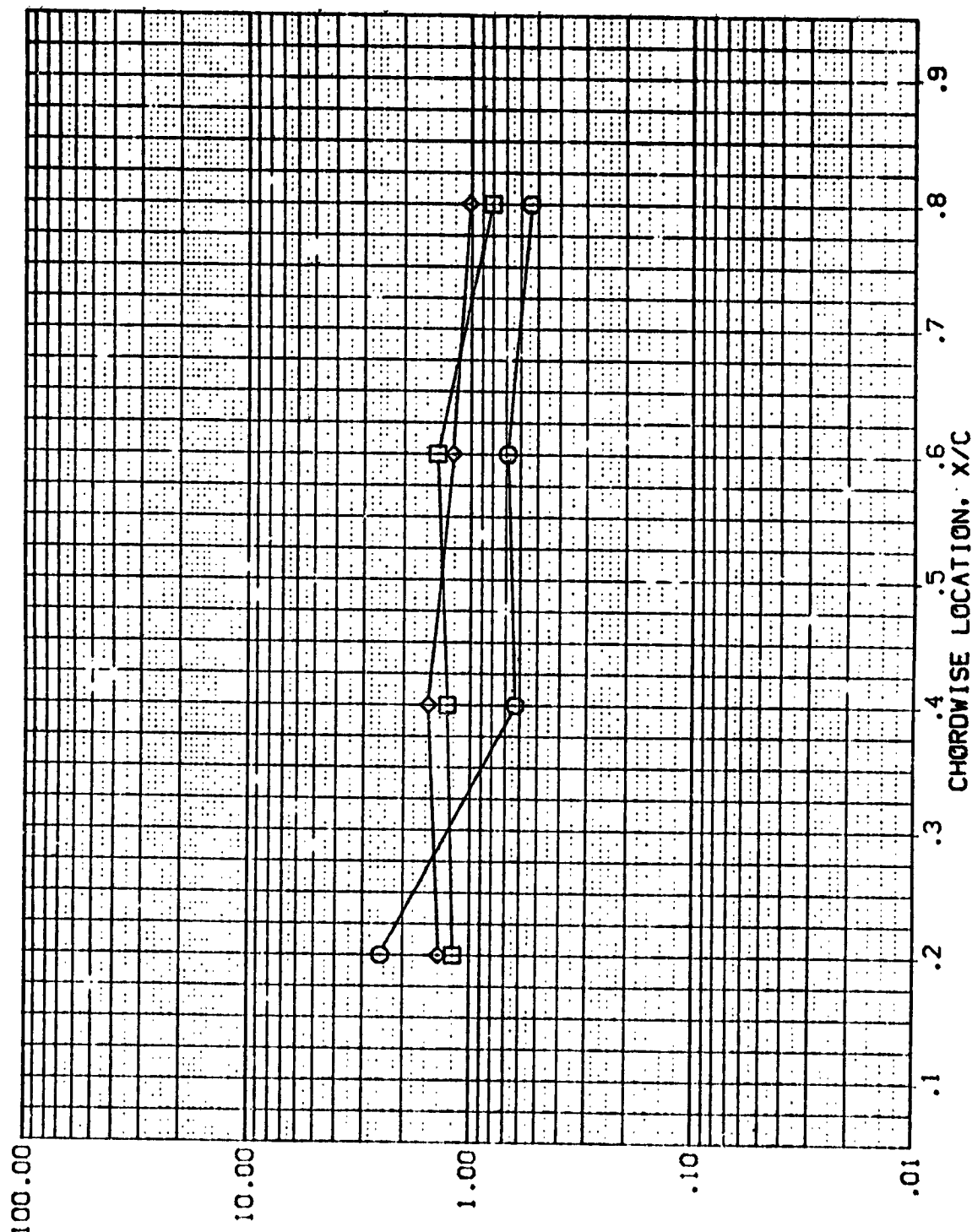


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG04)

SYMBOL 2Y/B HAW/HT MACH
 .400 .900 5.219
 .600
 .800

PARAMETRIC VALUES
 SN.000 BETA
 1.000 .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

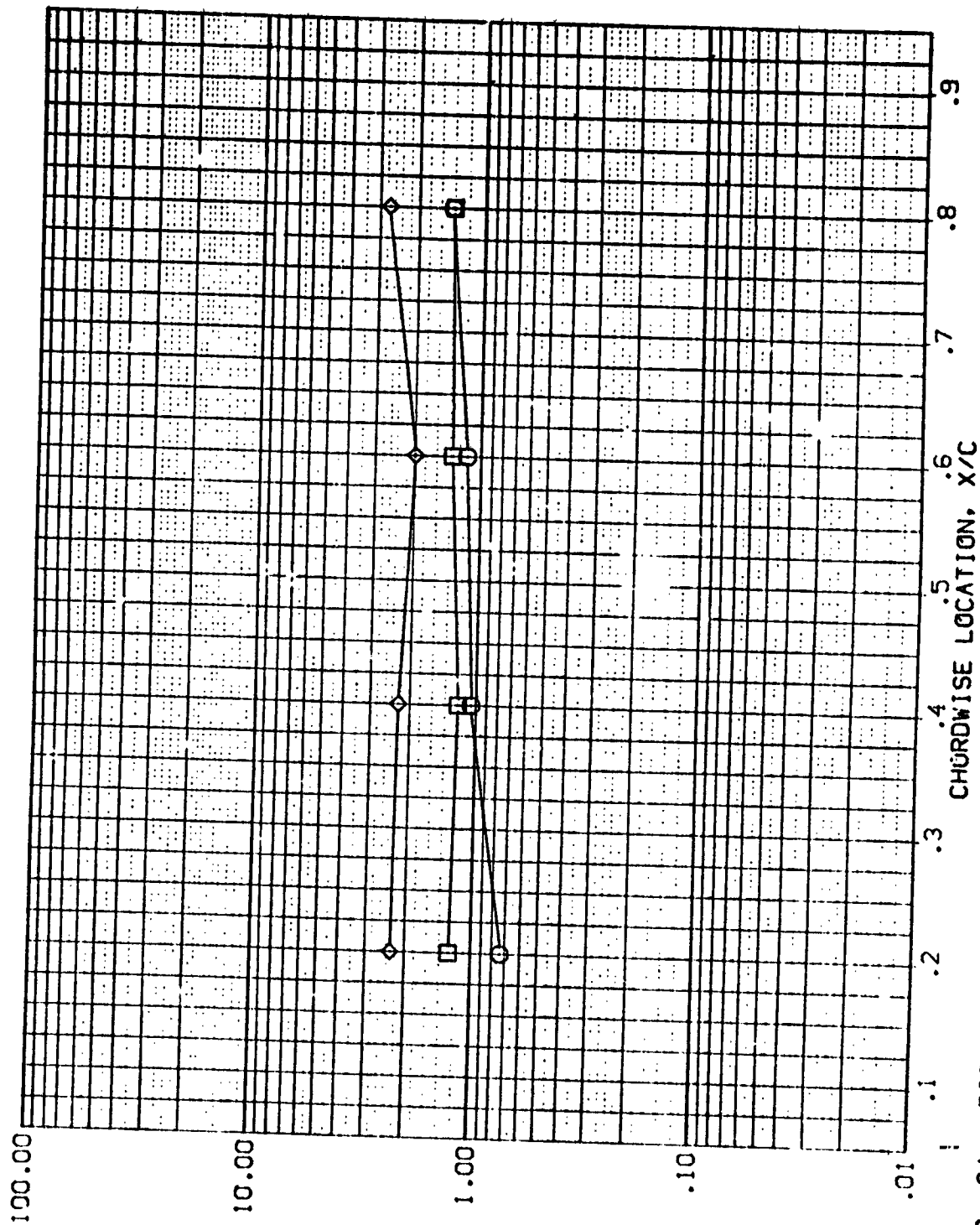


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG05)

SYMBOL
 ◻
 ◻
 ◊

2V/B .400
 .600
 .800
 HAW/HT .900
 MACH 5.220

PARAMETRIC VALUES
 ALPHA 120.000
 PN/2 1.000
 BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

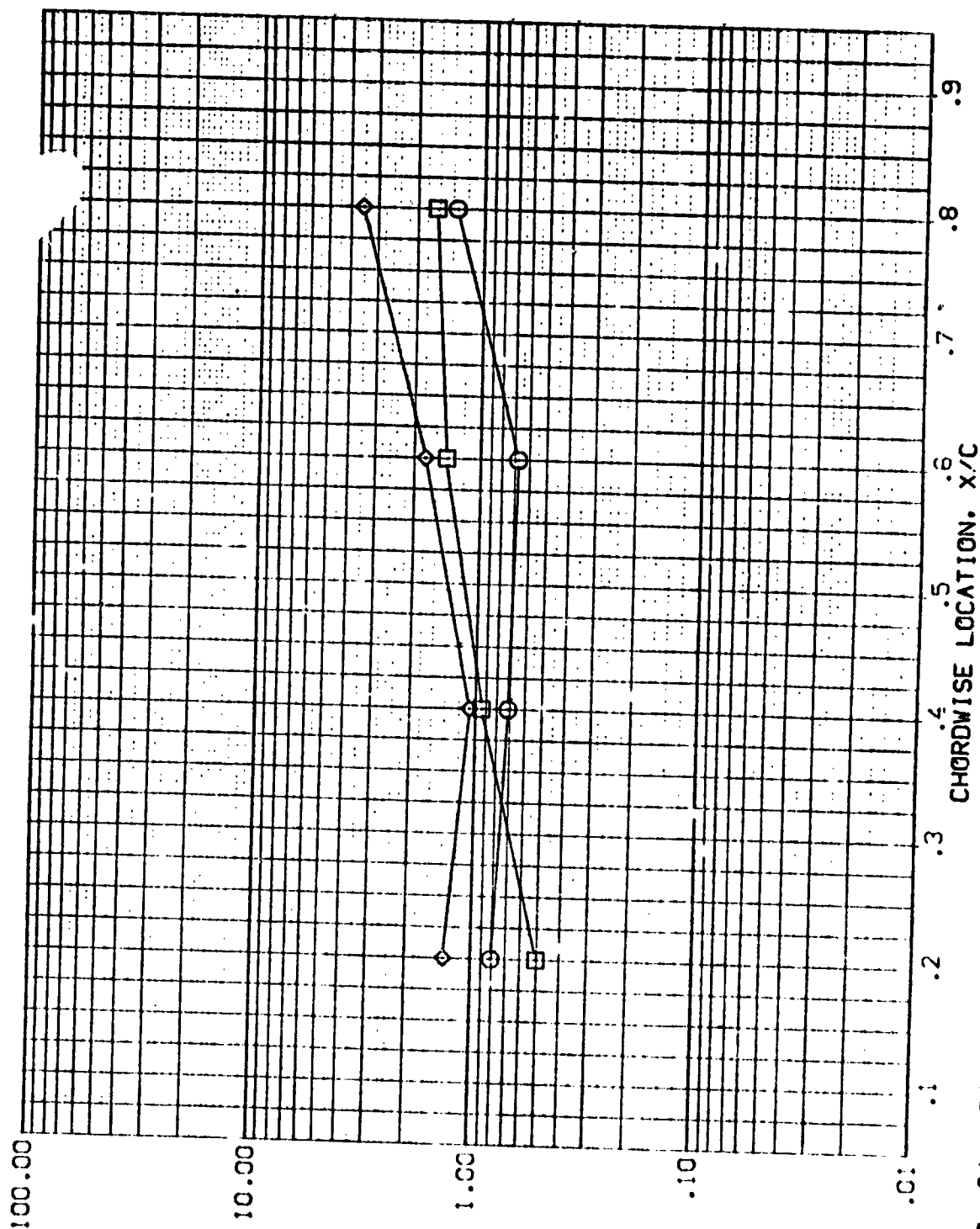


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG06)

SYMBOL	2V/B	HAW/HT	MACH	PARAMETRIC VALUES
	.400	.900	5.220	ALPHA
	.600			RN/L
	.800			BETA
				1.000
				.000

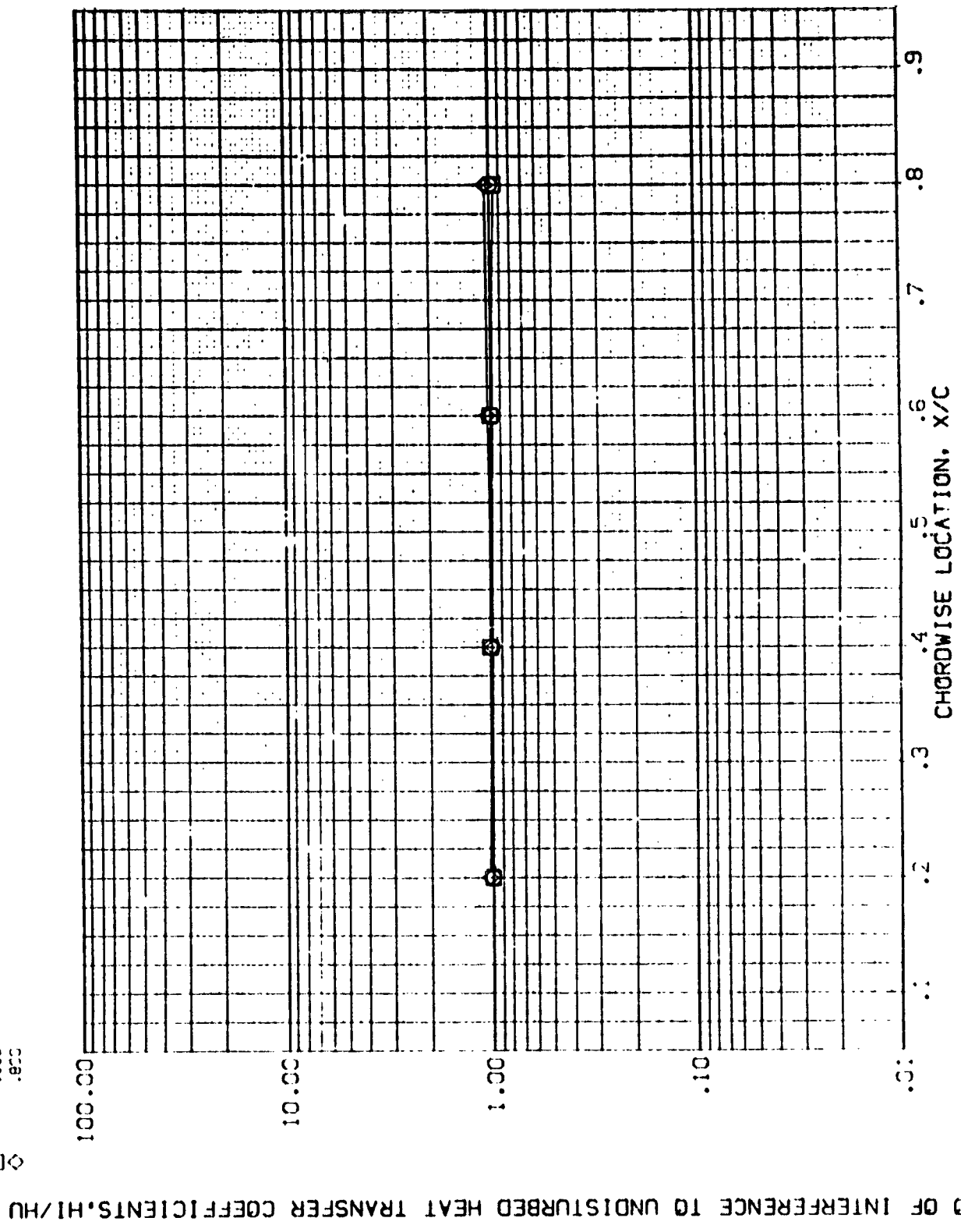


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 G1+T1 WING UPPER SURFACE (BEVG07)

SYMBOL

2Y/B
-400
.600
.800

HAW/HT
.900

MACH
5.219

PARAMETRIC VALUES

-90.000 BETA .000
RN/L 1.000

ALPHA
RN/L

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

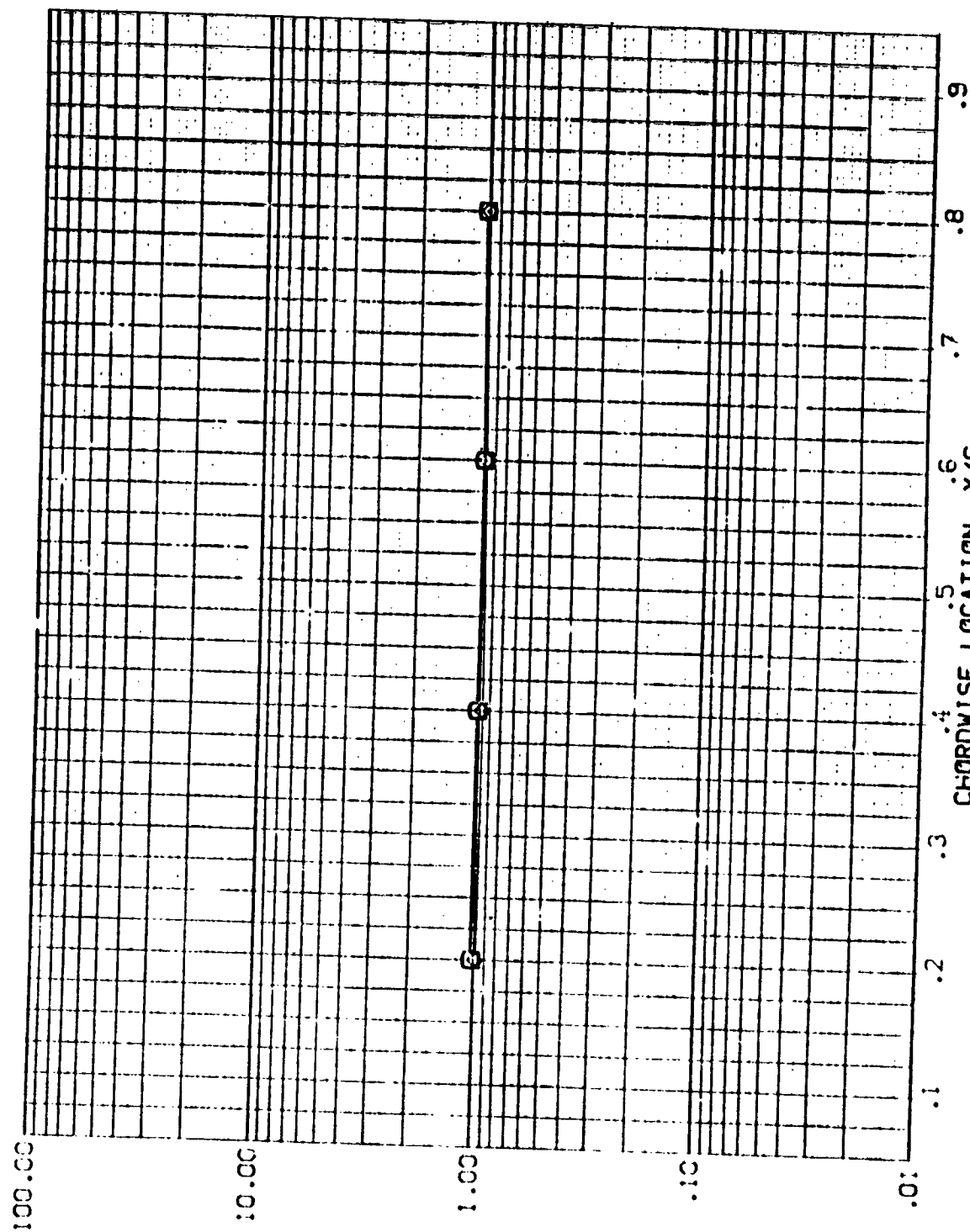


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 G1+T1 WING UPPER SURFACE (BEVG08)

SYMBOL	2Y/B	HAW/HT	MACH	PARAMETRIC VALUES
◇ □	.400	.900	5.220	ALPHA
	.600			RM/L
	.800			BETA
				.000

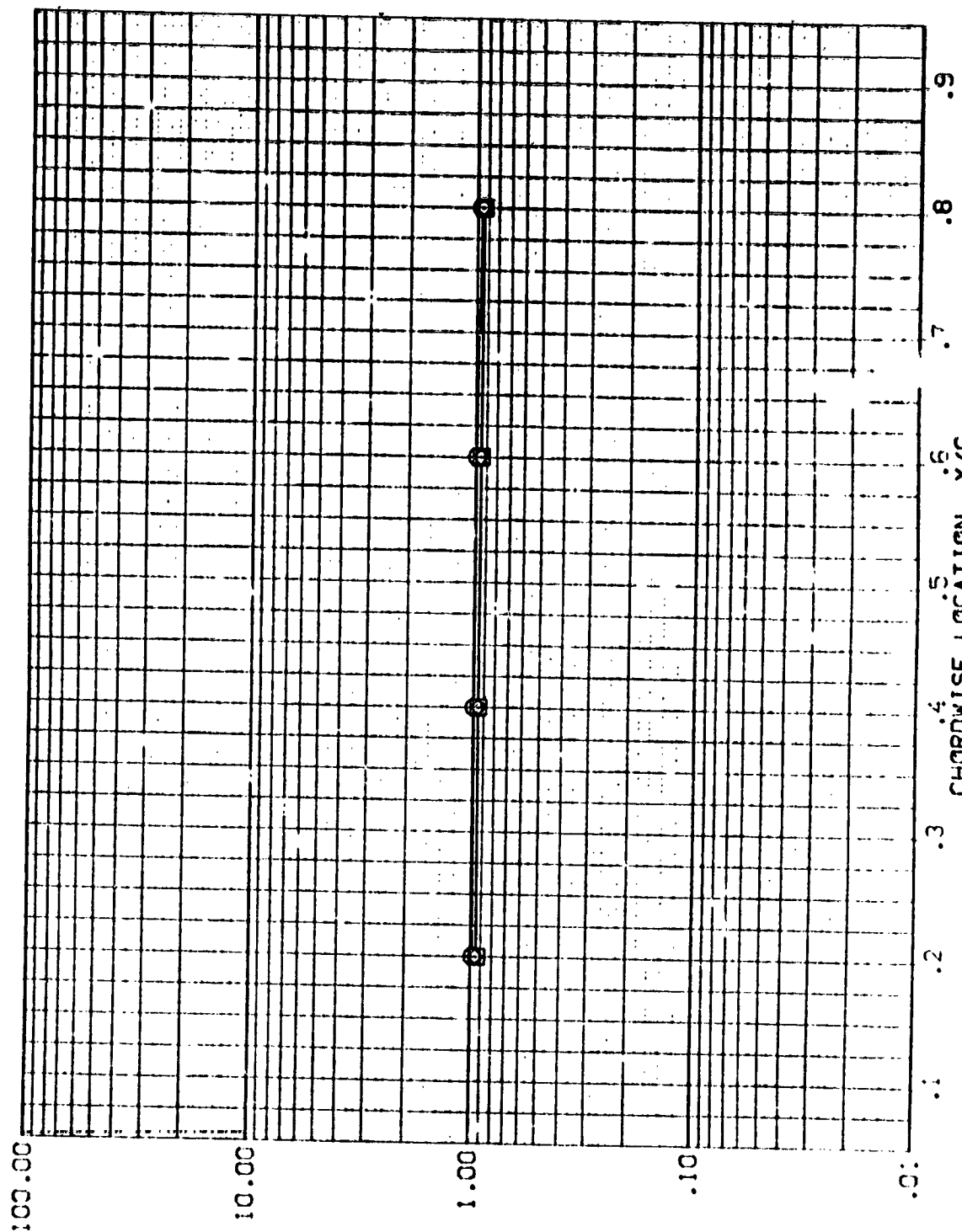


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AYES 3.5-195 1428 01+11 WING UPPER SURFACE

(BEVG09)

SYMBOL 21/8
 .400
 .600
 .800

MAW/MT .800
 MACH 5.220

PARAMETRIC VALUES
 ALPHA
 RINC
 -31.000
 1.000
 BETA
 .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

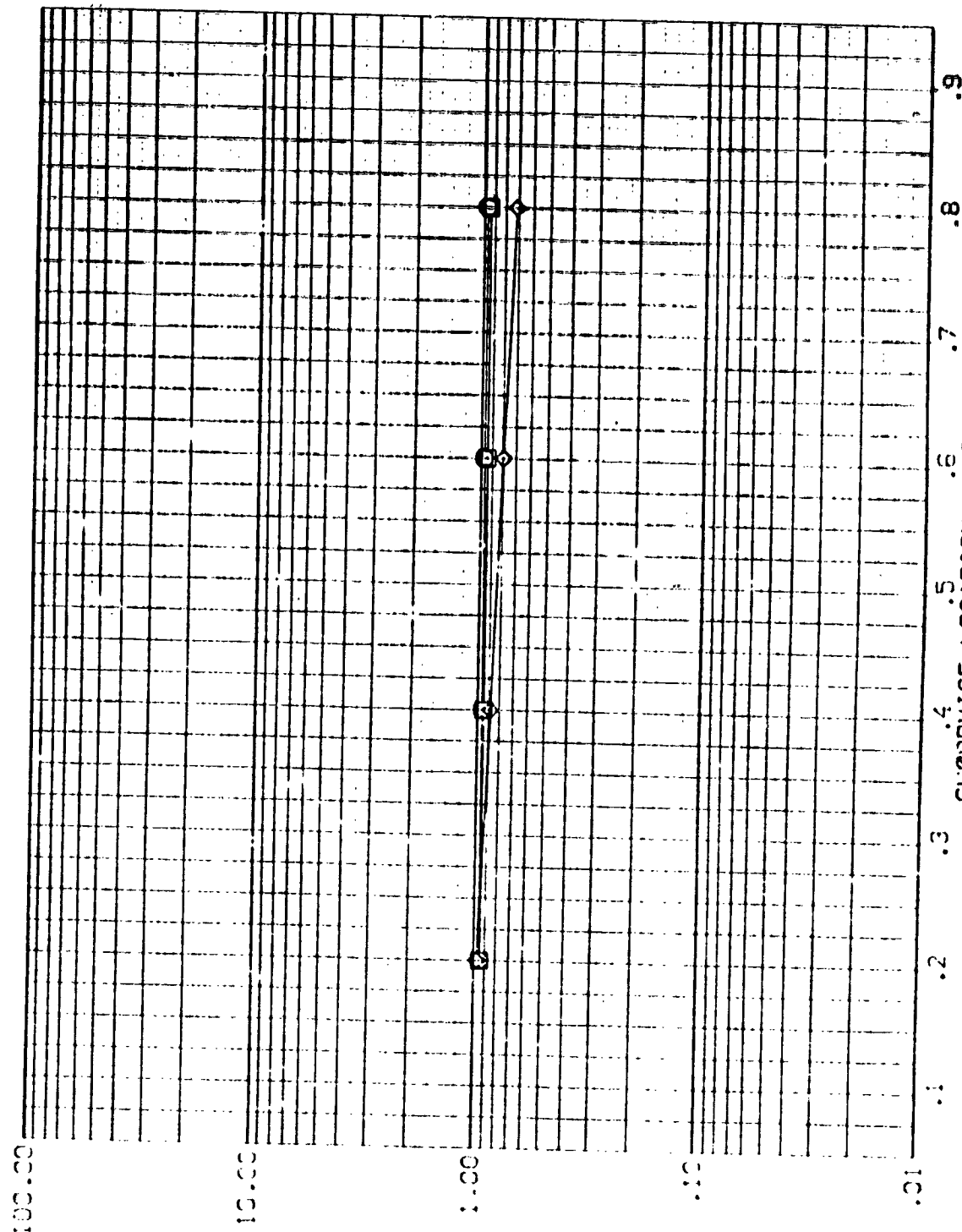


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01-T1 WING UPPER SURFACE (BEVG01)

SYMBOL X/C
 ▽ .200
 □ .400
 ◇ .600
 ◆ .800

HAW/HT MACH
 .900 5.228

PARAMETRIC VALUES
 ALPHA .000
 RN/L 1.000
 BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

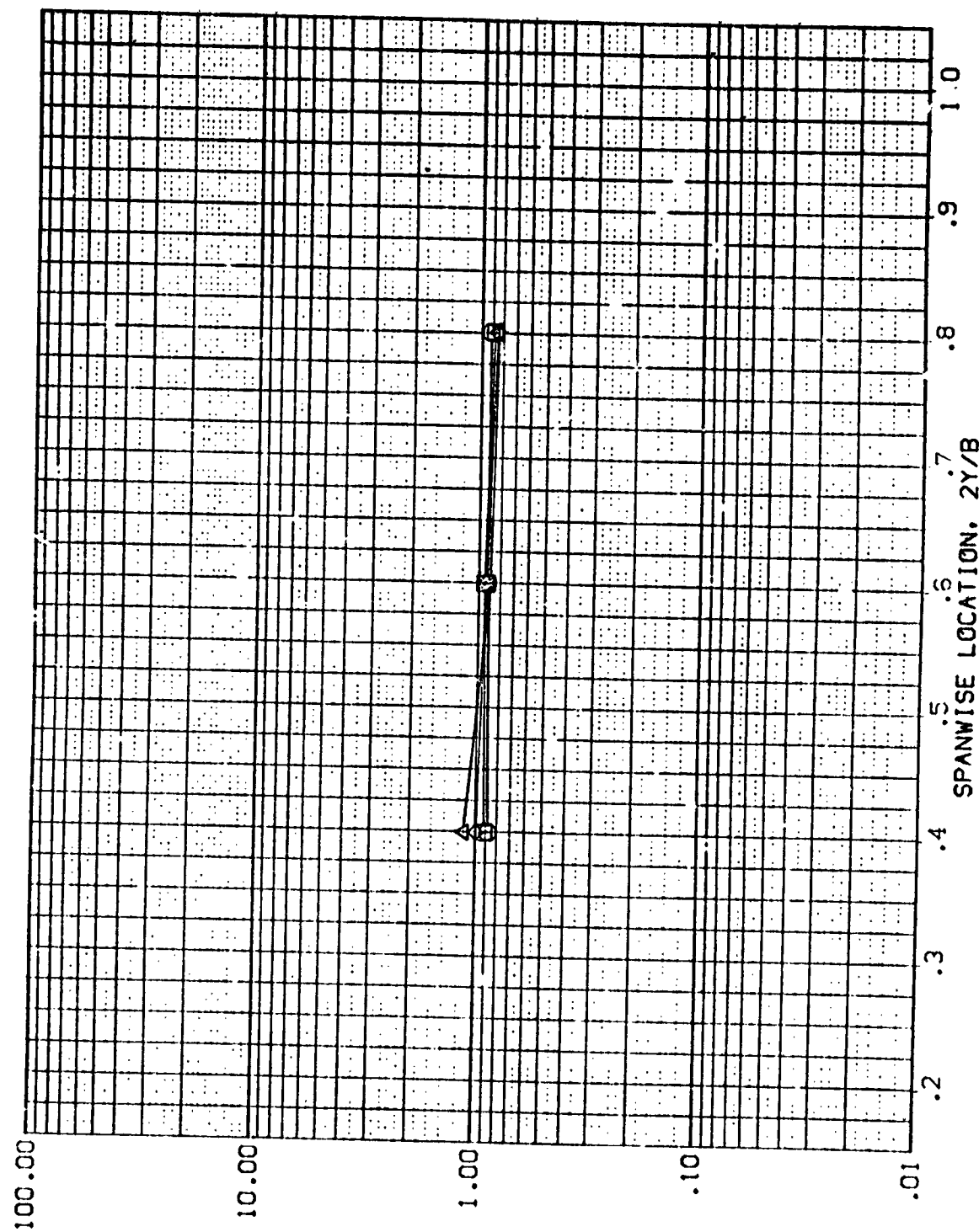


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG02)

SYMBOL X/C HAW/HT MACH
 ◊ .200 .900 5.219
 □ .400
 ◊ .600
 ◊ .300

PARAMETRIC VALUES
 ALPHA 30.000 BETA .000
 RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

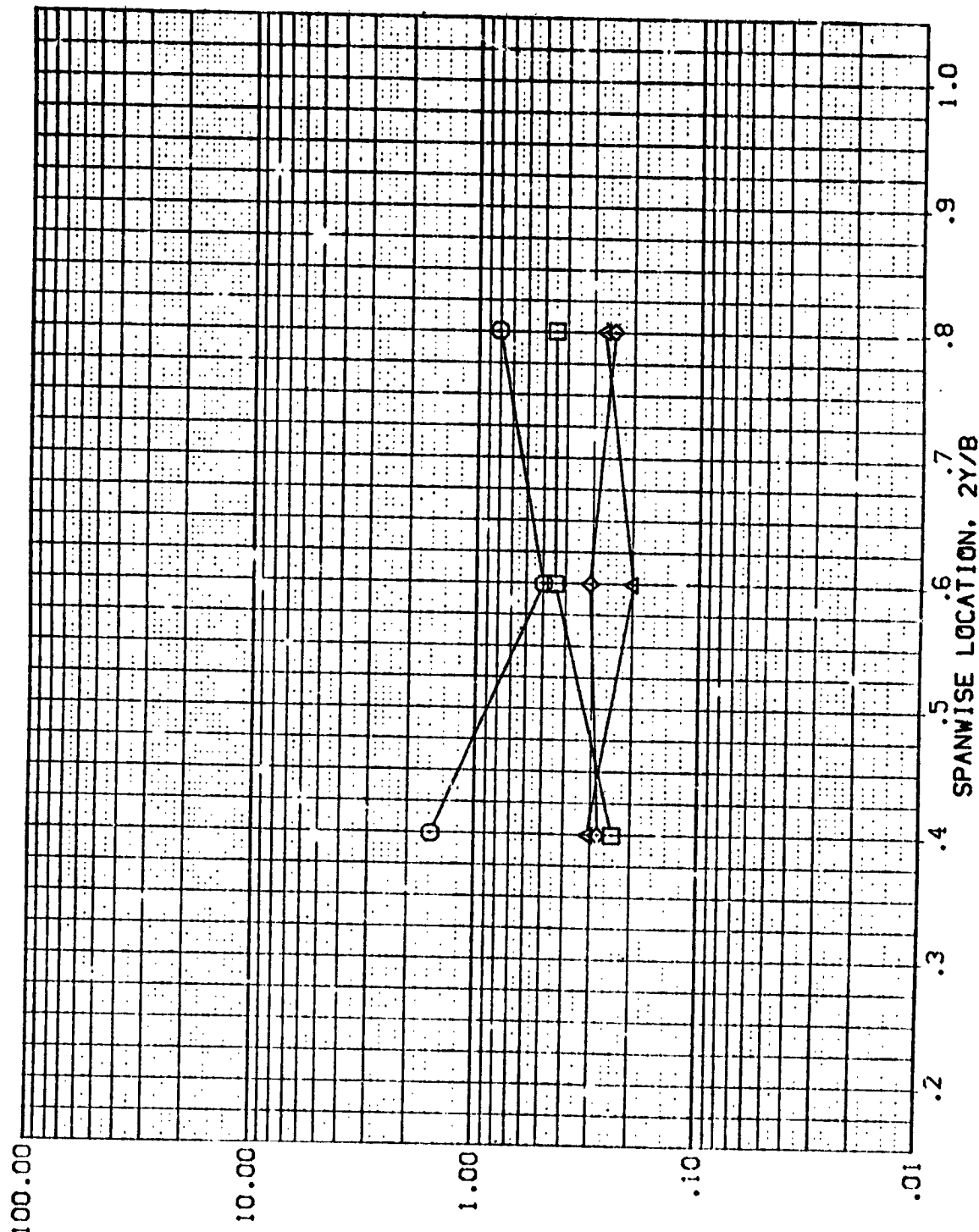


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG03)

PARAMETRIC VALUES
 ALPHA 60.000
 BETA 1.000
 RV/L

SYMBOL X/C HAW/HT PACH
 0.200
 0.400
 0.600
 0.800

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

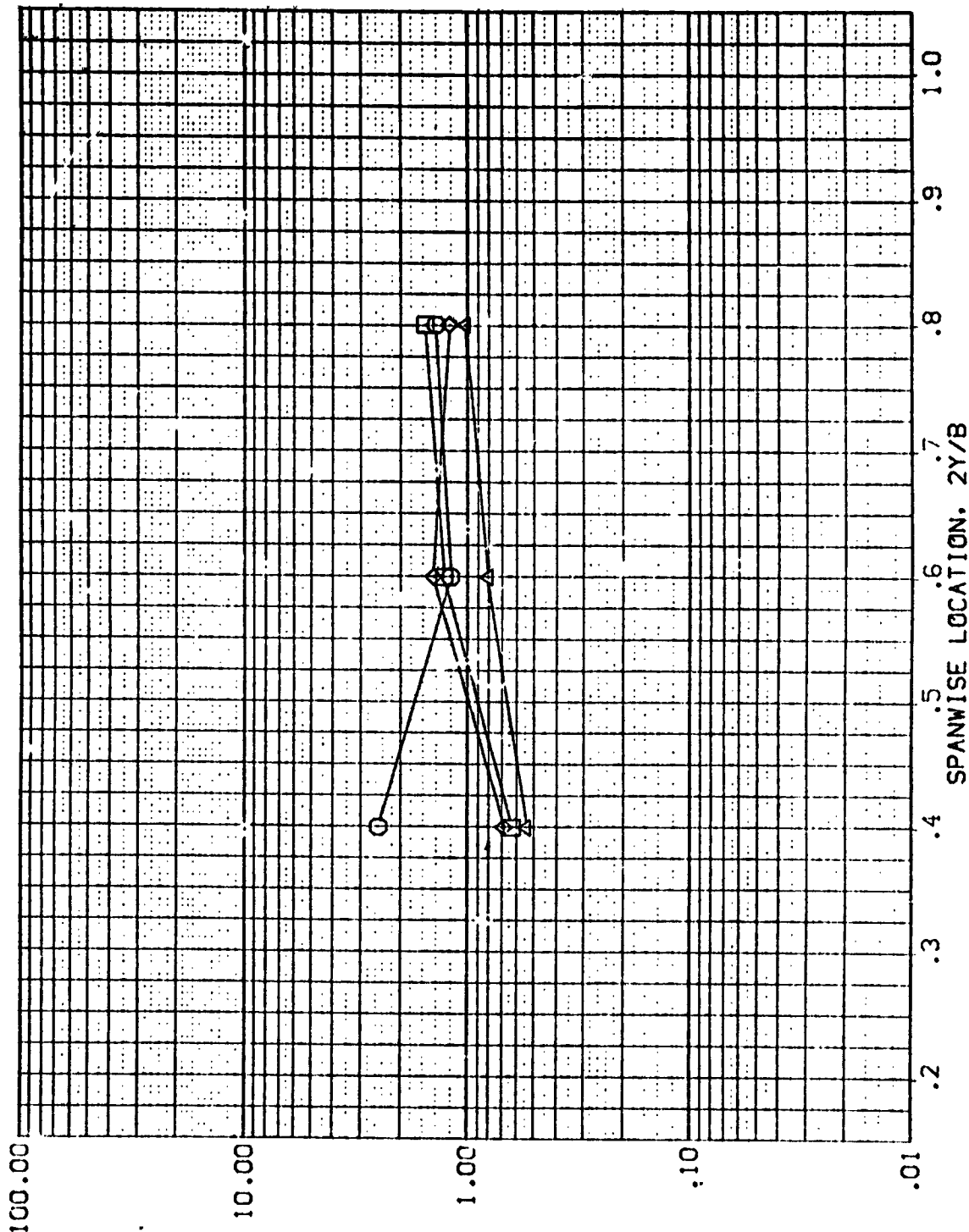


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG04)

SYMBOL X/C
 □ .200
 ○ .400
 △ .600
 ◇ .800

HAW/HT MACH
 .900 5.219

PARAMETRIC VALUES
 ALPHA 90.000
 RN/L 1.000
 BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

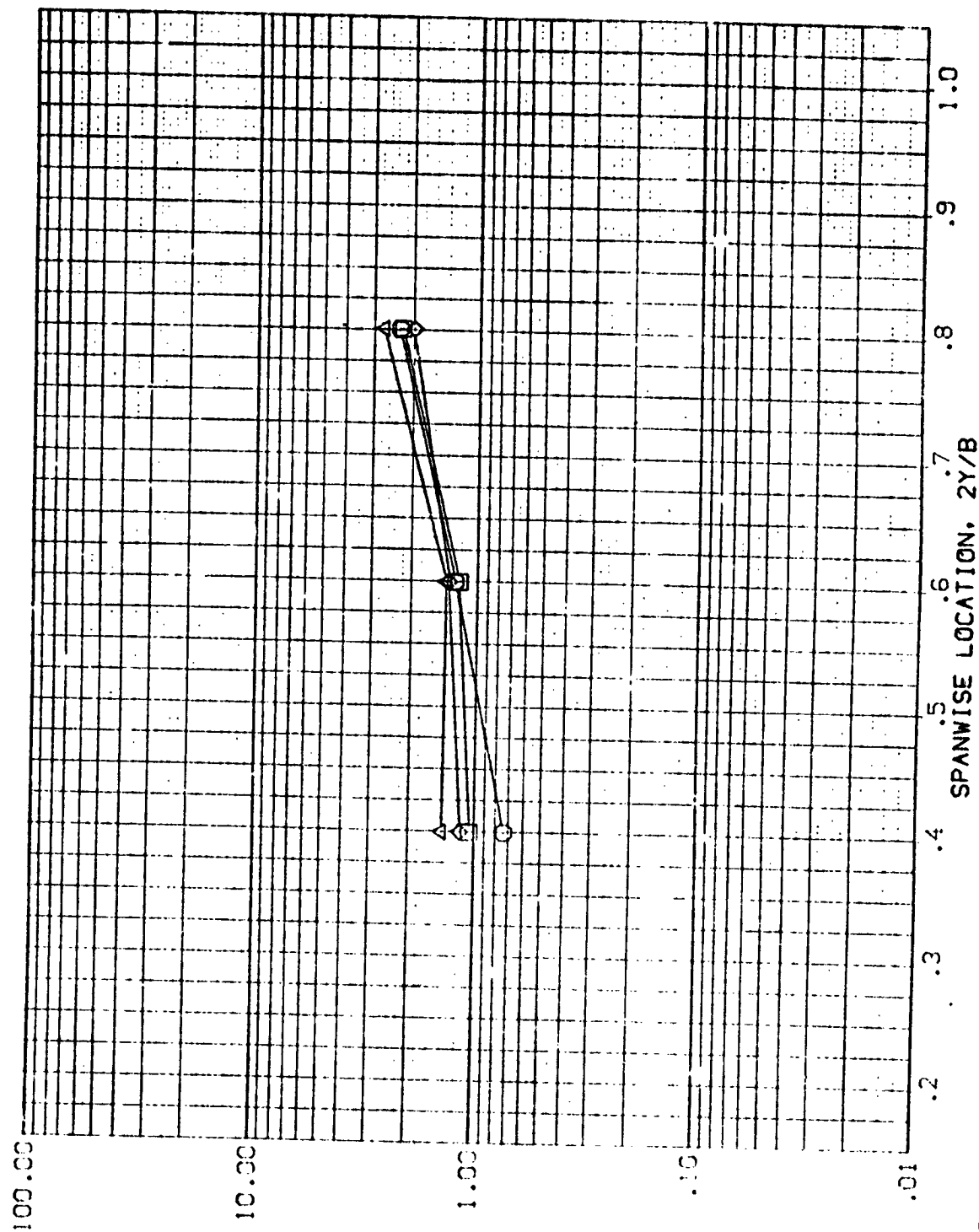


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01-T1 WING UPPER SURFACE (BEVG05)

PARAMETRIC VALUES
 α 12°.000 β 1.000
 RN/L .000

SYMBOL X/C HAW/HT MACH
 \diamond .200 .900 5.220
 \square .400 .900 5.220
 \triangle .600 .900 5.220
 \circ .800 .900 5.220

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, H_i/H_u

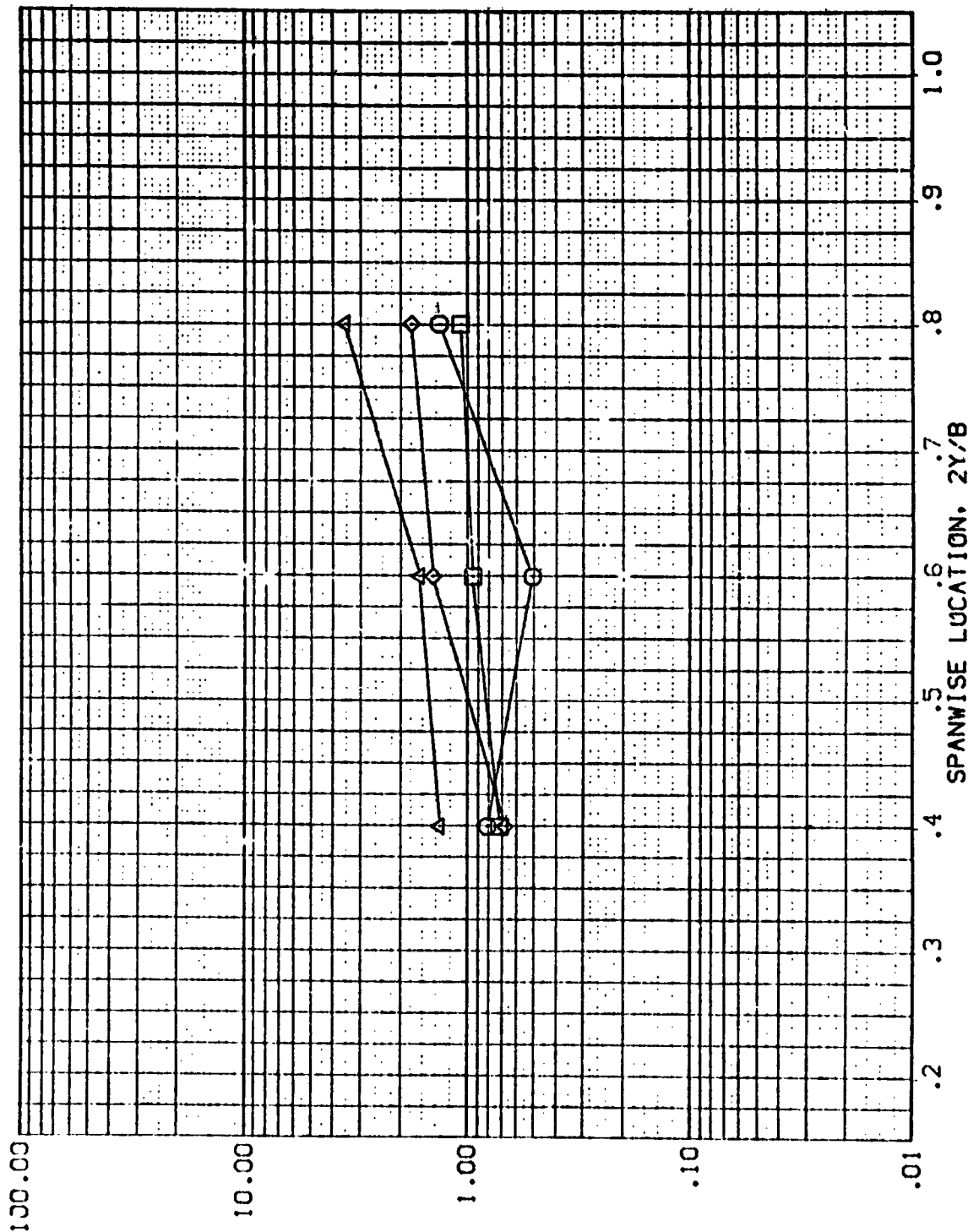


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG07)

SYMBOL X/C
 ◻ .200
 ◻ .400
 ◻ .600
 ◻ .800

HAW/HT MACH
 .900 5.219

PARAMETRIC VALUES
 ALPHA -90.000
 RN/L 1.000
 BETA .000

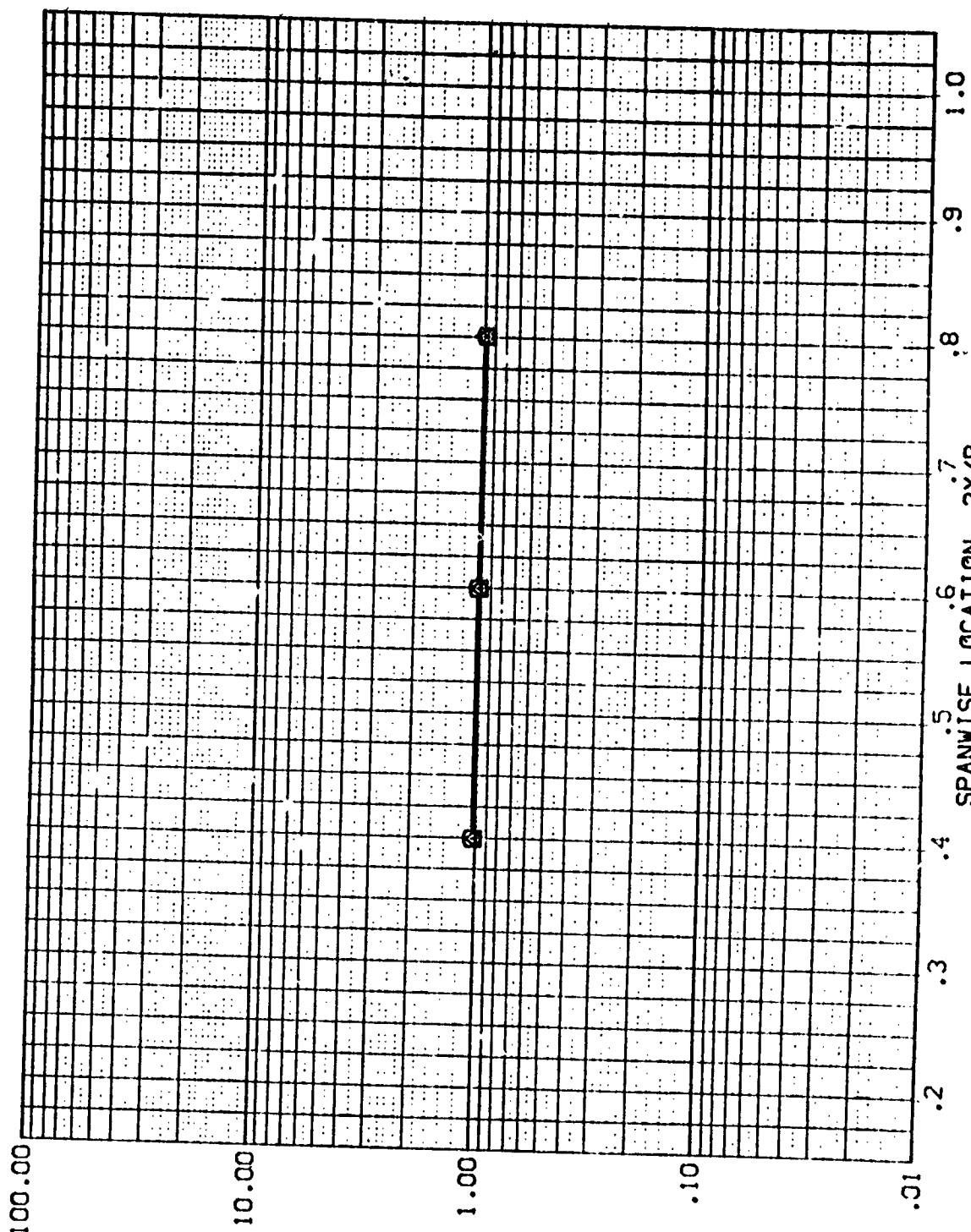


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

11. 1111 1111 1111 1111

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG08)

SYMBOL	X/C	MAW/WT	MACH	PARAMETRIC VALUES
◇	.200	.900	5.220	-6C 300
◇	.400			BETA
◇	.600			1.000
◇	.800			.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

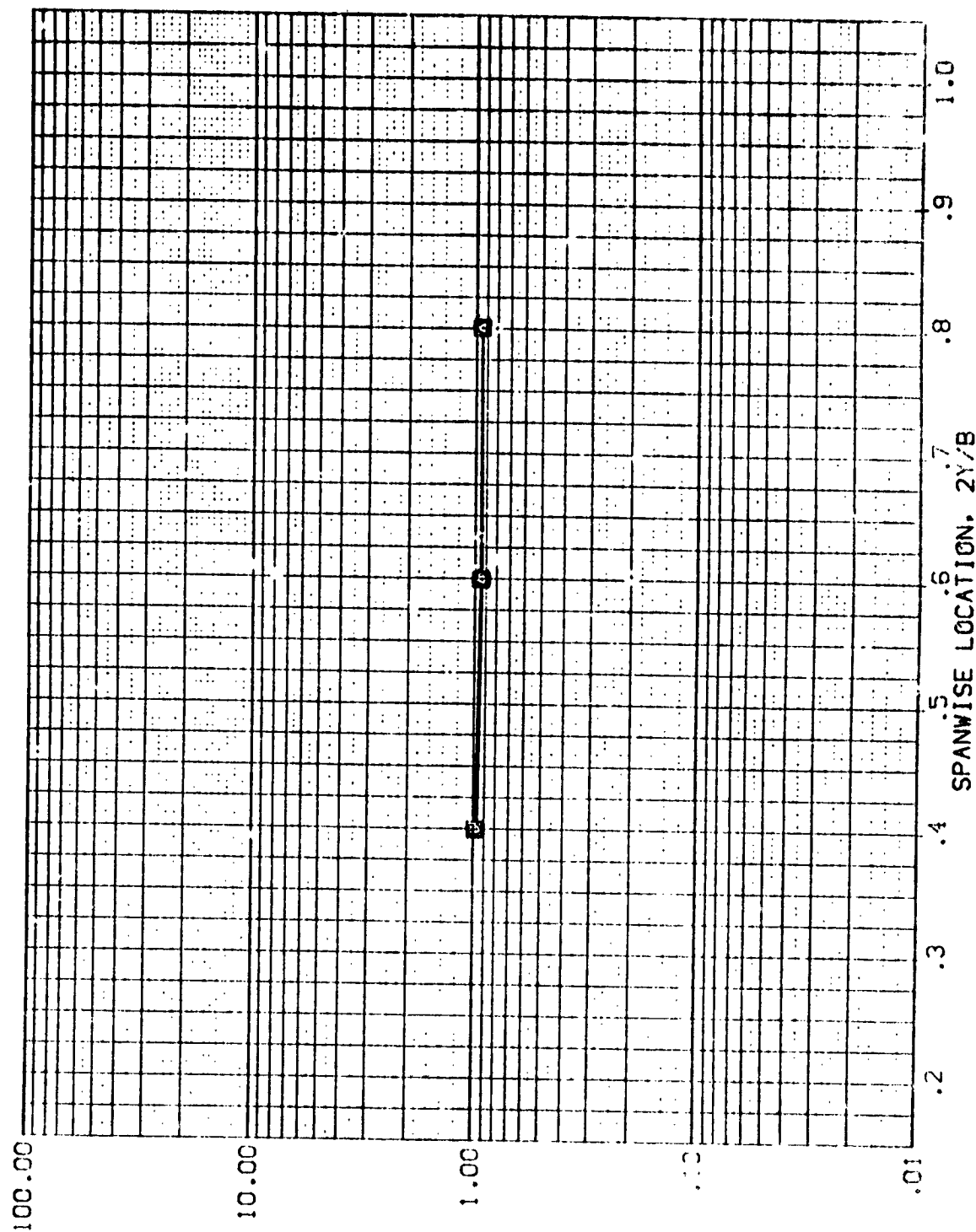


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG09)

SYMBOL X/C
 ▽ 0.200
 ◊ 0.400
 □ 0.600
 ◇ 0.800

HAN/HT MACH
 .900 5.220

PARAMETRIC VALUES
 ALPHA -30.000
 RN/L 1.000
 BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

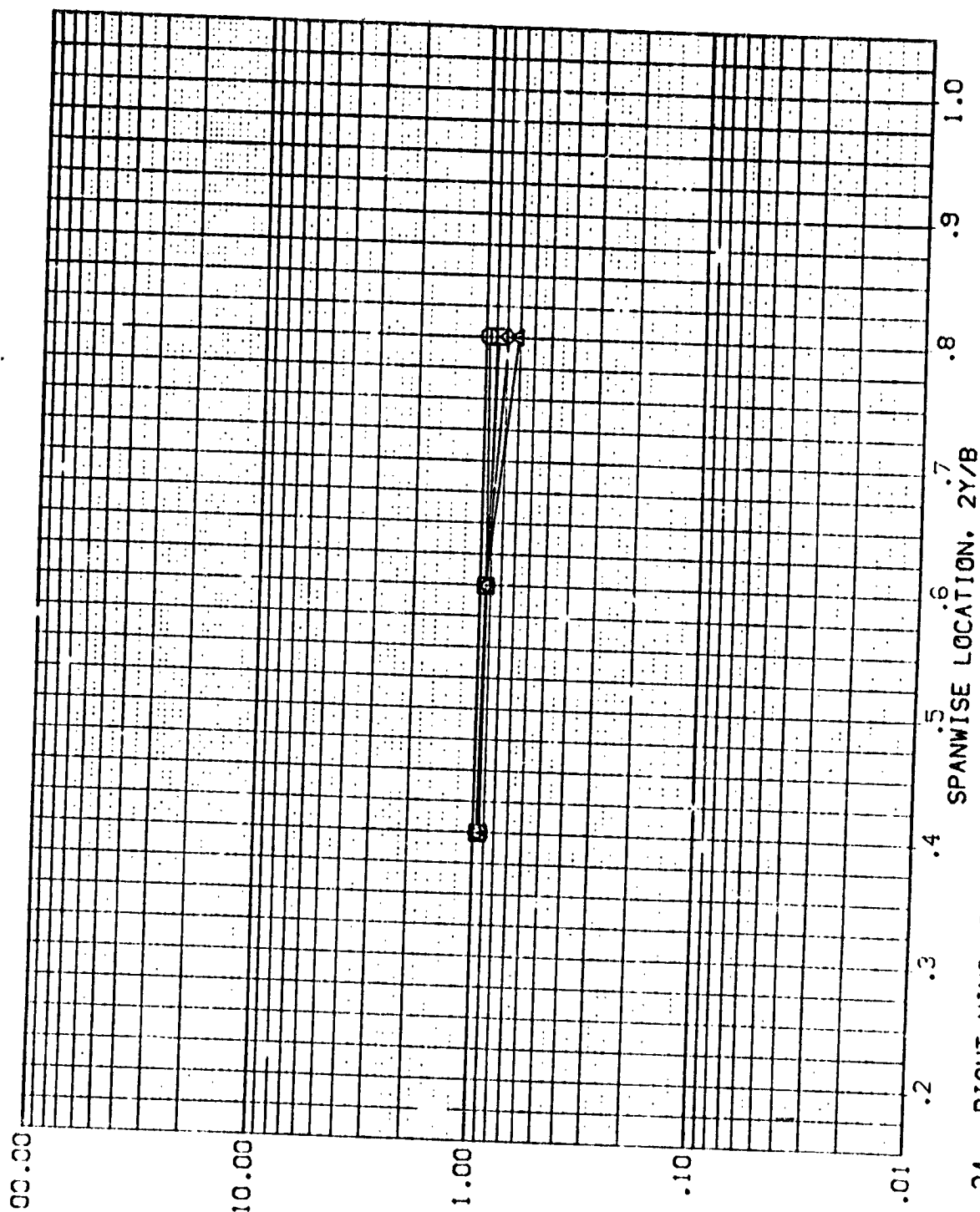


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SET SYMBOL
(BEV501)
(BEV502)
(BEV503)
(BEV504)
(BEV505)

CONFIGURATION DESCRIPTION
AMES 3.5-195 [428 CI+T] WING UPPER SURFACE
AMES 3.5-195 [428 CI+T] WING UPPER SURFACE
AMES 3.5-195 [428 CI+T] WING UPPER SURFACE
AMES 3.5-195 [428 CI+T] WING UPPER SURFACE
AMES 3.5-195 [428 CI+T] WING UPPER SURFACE

ALPHA BETA RN/L
.000 .000 1.000
30.000 .000 1.000
60.000 .000 1.000
90.000 .000 1.000
120.000 .000 1.000

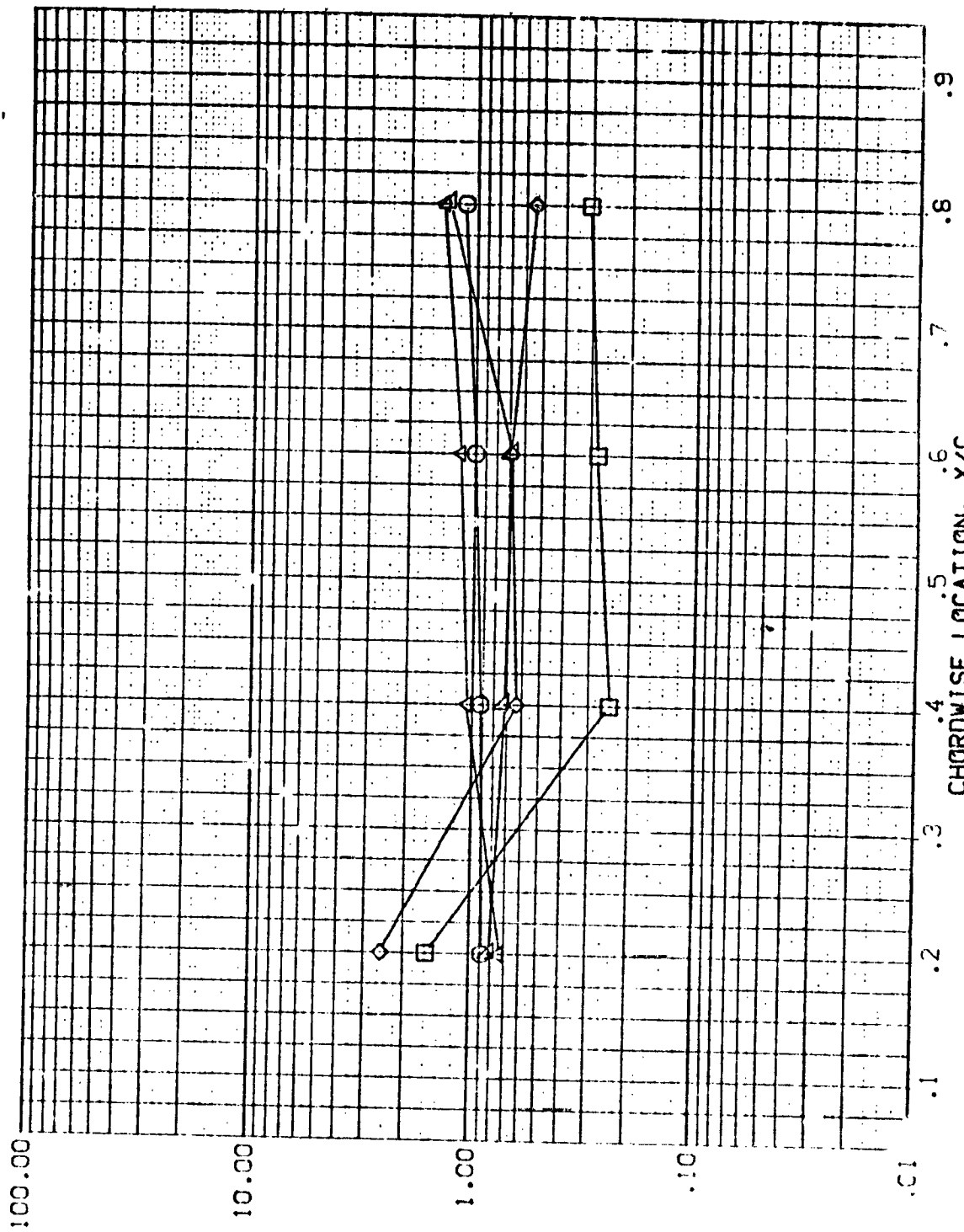


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT = .900 2Y/B = .400

DATA SET SYMBOL

(BEGV001)
(BEGV002)
(BEGV003)
(BEGV004)
(BEGV005)

CONFIGURATION DESCRIPTION

AMES 3-5-195 1428 01+11 WING UPPER SURFACE
AMES 3-5-195 1428 01+11 WING UPPER SURFACE
AMES 3-5-195 1428 01+11 WING UPPER SURFACE
AMES 3-5-195 1428 01+11 WING UPPER SURFACE
AMES 3-5-195 1428 01+11 WING UPPER SURFACE

ALPHA BETA RN/L
.000 .000 1.000
30.000 .000 1.000
60.000 .000 1.000
90.000 .000 1.000
120.000 .000 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

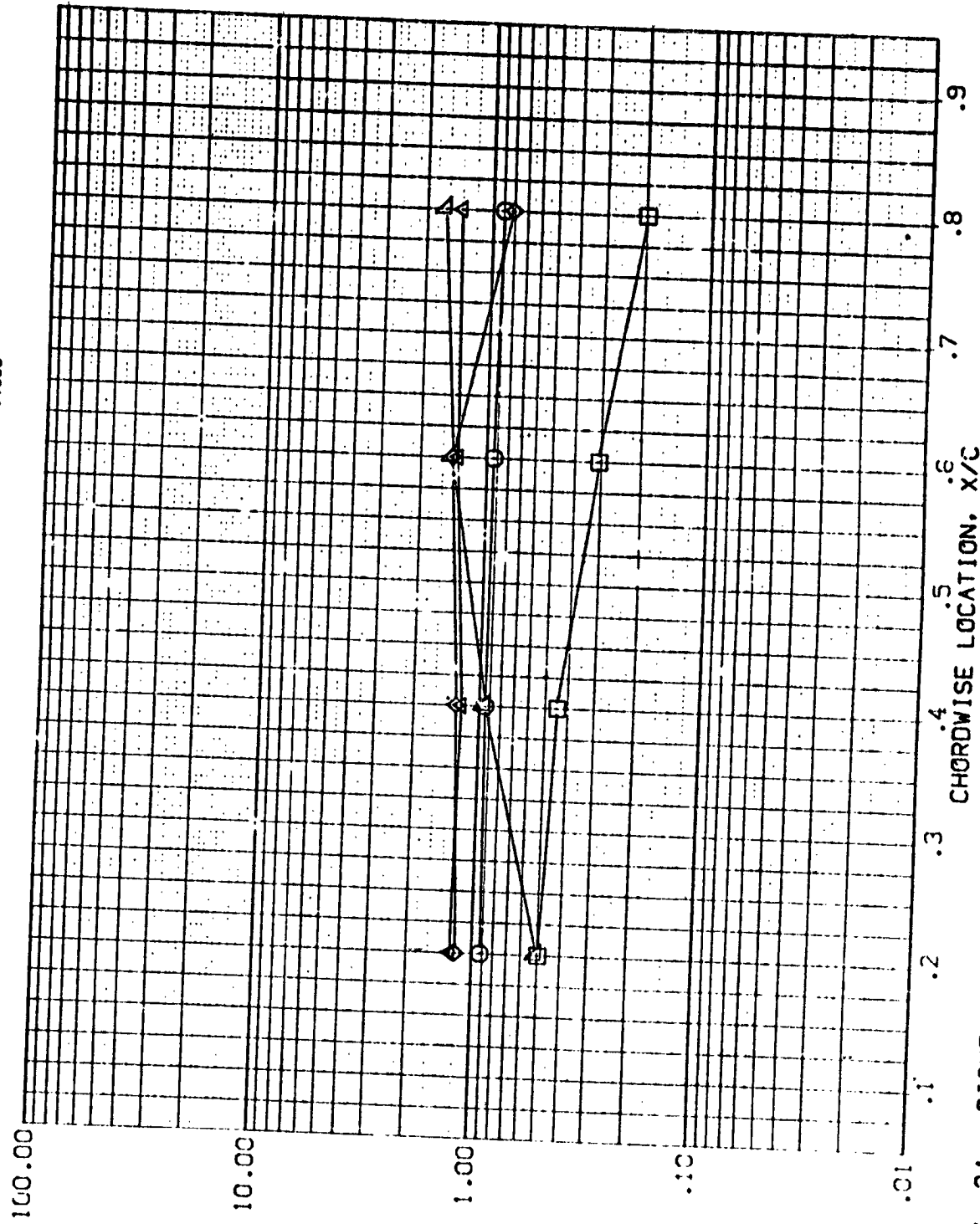
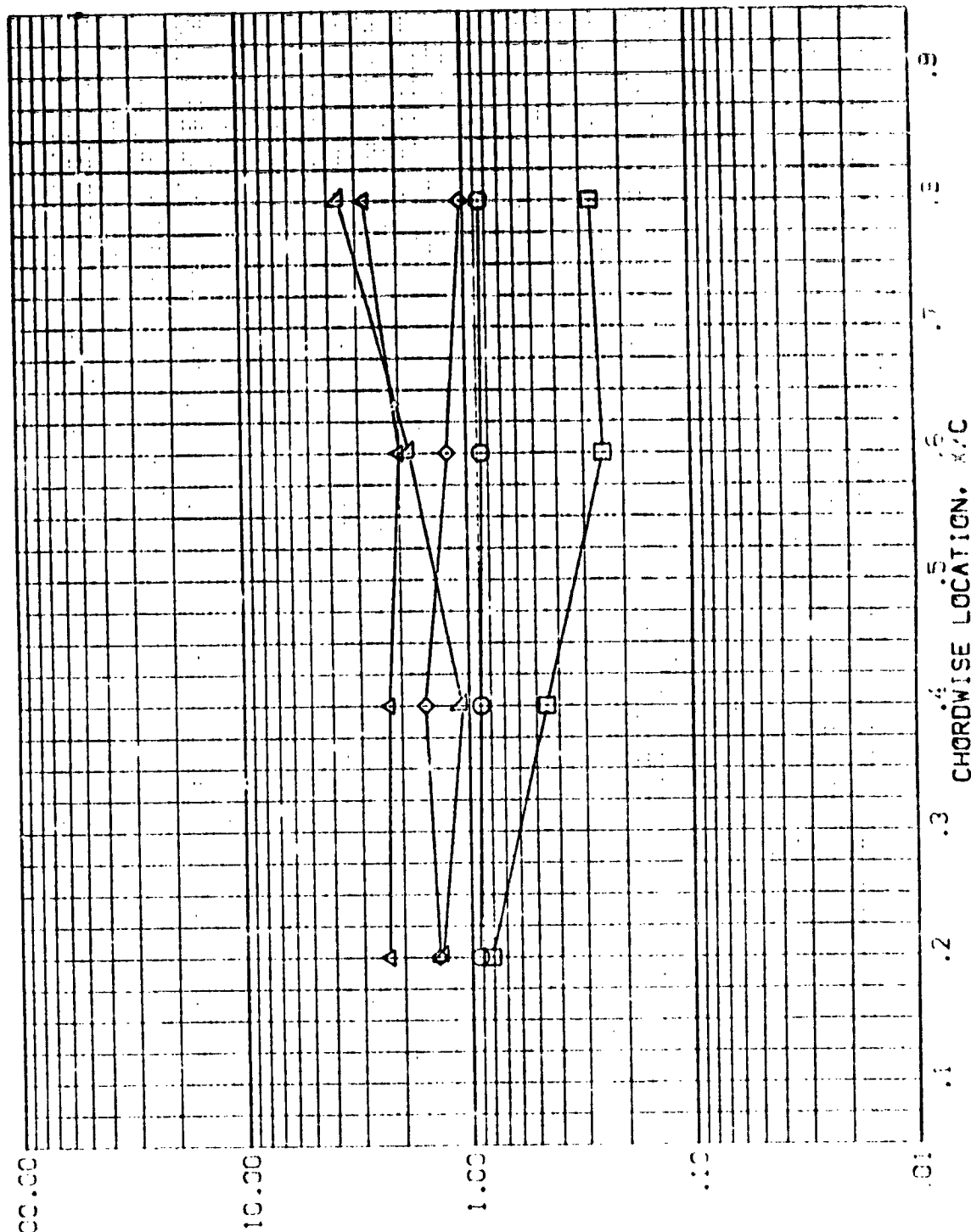


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

$Re_{ACH} = 5.300 \times 10^6$ $2Y/B = .600$

ALPHA	BETA	PN/L
0.000	.00	1.000
30.000	.00	1.000
60.000	.00	1.000
90.000	.00	1.000
120.000	.00	1.000



EIG 74 EIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

[illegible]

DATA SET SYMBOL
 (BEV601)
 (BEV602)
 (BEV603)
 (BEV604)
 (BEV605)
 (BEV606)
 (BEV607)
 (BEV608)

CONFIGURATION DESCRIPTION
 ASES 3.5-195 1428 01+11 WING
 ASES 3.5-195 1428 01+11 WING
 ASES 3.5-195 1428 01+11 WING
 ASES 3.5-195 1428 01+11 WING
 ASES 3.5-195 1428 01+11 WING
 ASES 3.5-195 1428 01+11 WING
 ASES 3.5-195 1428 01+11 WING

UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE
 UPPER SURFACE

ALPHA BETA RV/L
 .000 .000 1.000
 .000 .000 1.000
 .000 .000 1.000
 .000 .000 1.000
 .000 .000 1.000
 .000 .000 1.000
 .000 .000 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

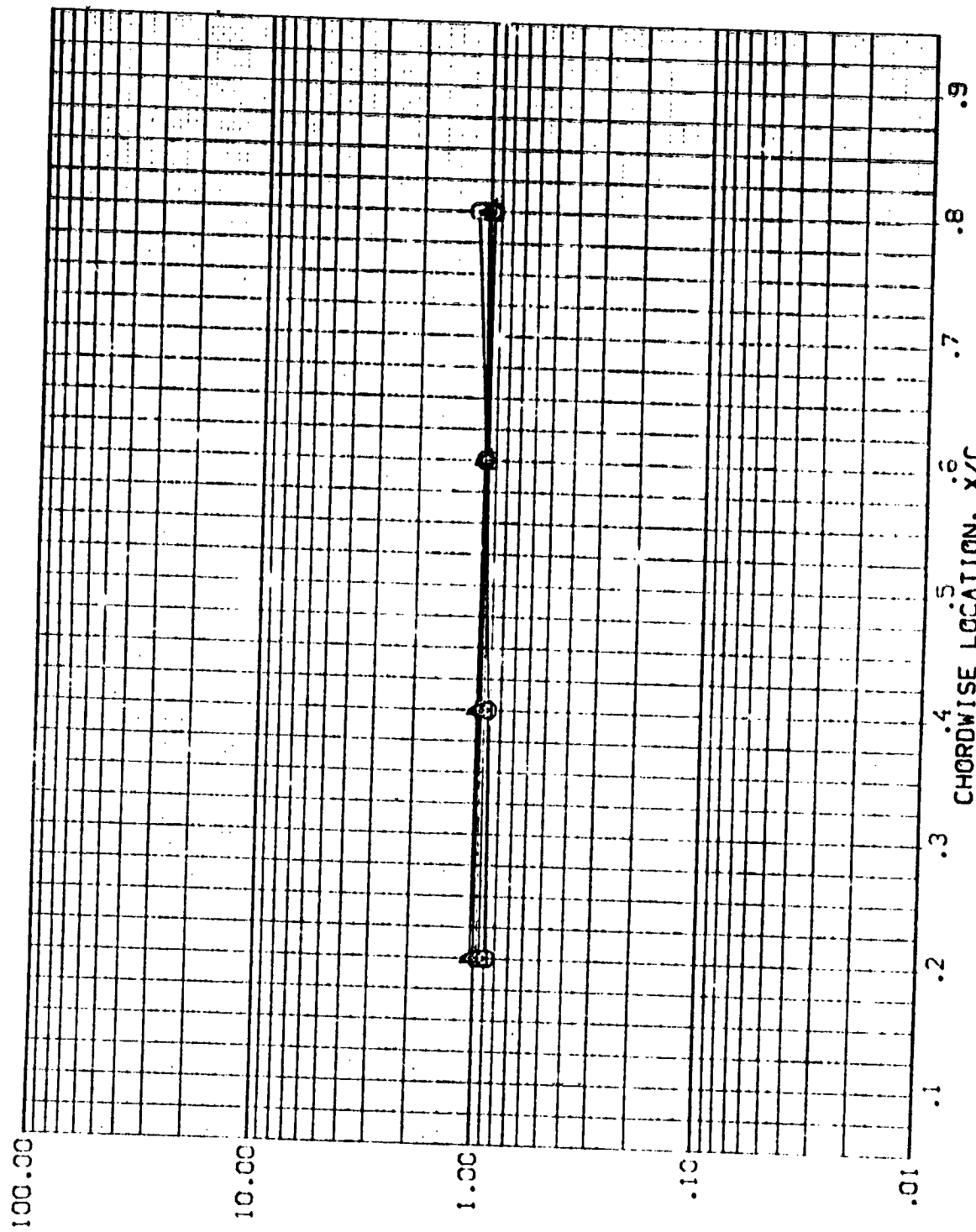


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

REYNOLDS NUMBER = 5.300 MACH = 0.900 2V/B = 0.400

RELATIONSHIP OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_1/h_0

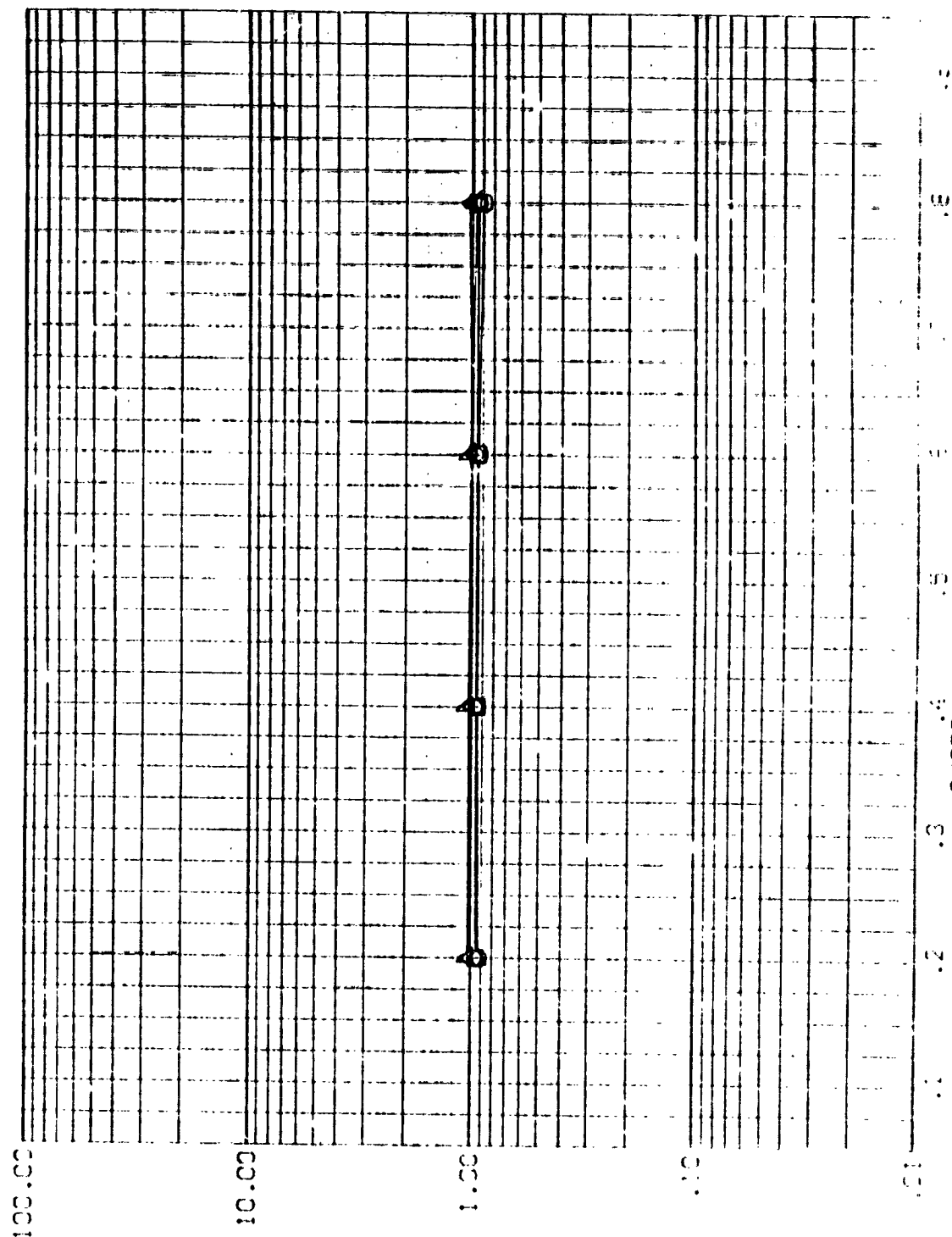
[illegible][illegible]

FIG. 24. RIGHT WING UPPER SURFACE. RATIO OF INTERFERENCE TO WING AREA = 0.0015.

[illegible][illegible]

DATA SE SYMBOL CONFIGURATION DESCRIPTION

DATA SE	SYMBOL	CONFIGURATION DESCRIPTION
(BEV601)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE
(BEV602)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE
(BEV603)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE
(BEV604)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE
(BEV605)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE

ALPHA BETA RV/L

ALPHA	BETA	RV/L
.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
90.000	.000	1.000
120.000	.000	1.000

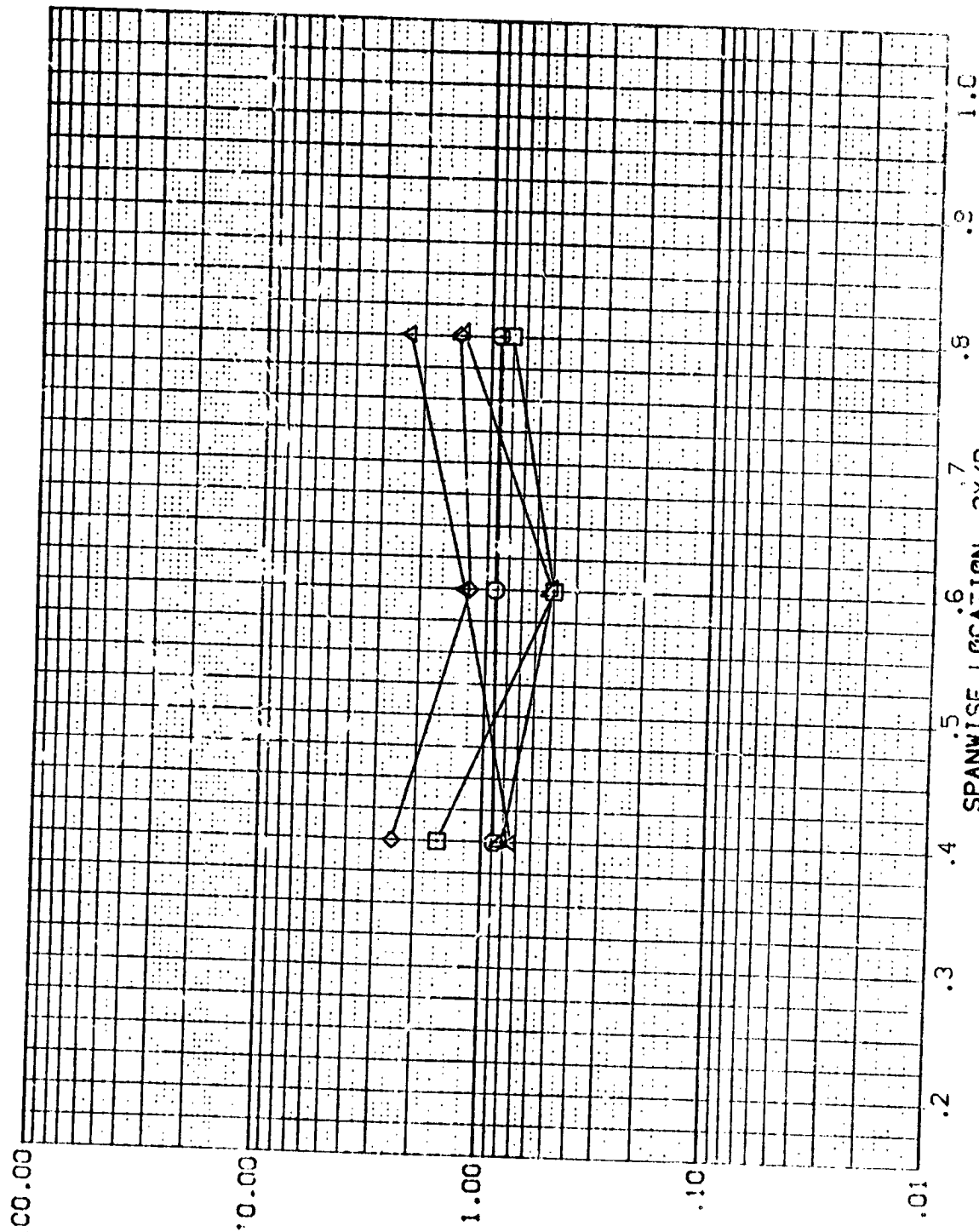


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/H-T = .900 X/C = .200

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEV601)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	.000	.000	1.000
(BEV602)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	30.000	.000	1.000
(BEV603)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	60.000	.000	1.000
(BEV604)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	90.000	.000	1.000
(BEV605)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	120.000	.000	1.000

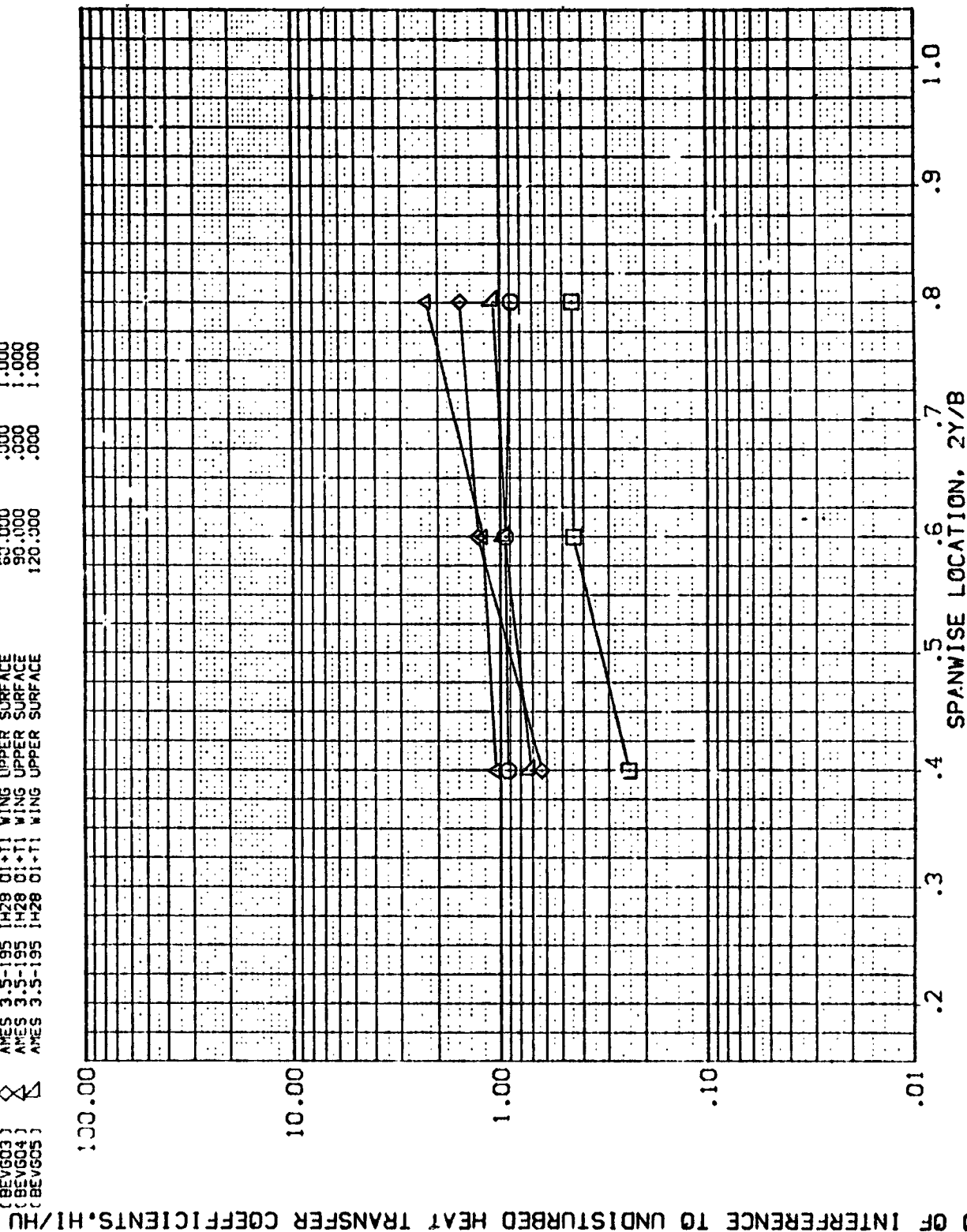


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEV001)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	.000	.000	1.000
(BEV002)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	30.000	.000	1.000
(BEV003)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	60.000	.000	1.000
(BEV004)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	90.000	.000	1.000
(BEV005)	AMES 3.5-195 H28 01+11 WING UPPER SURFACE	120.000	.000	1.000

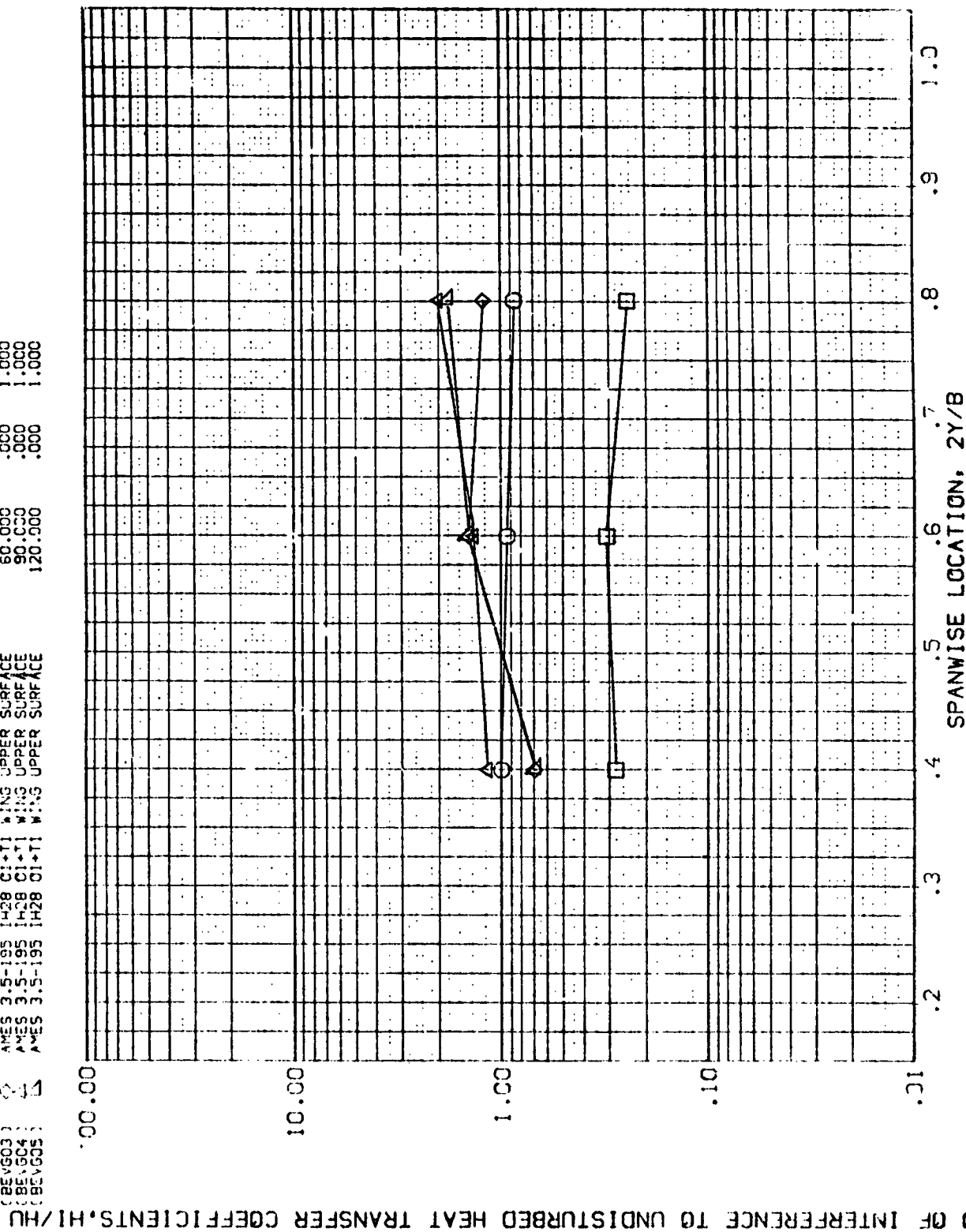


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

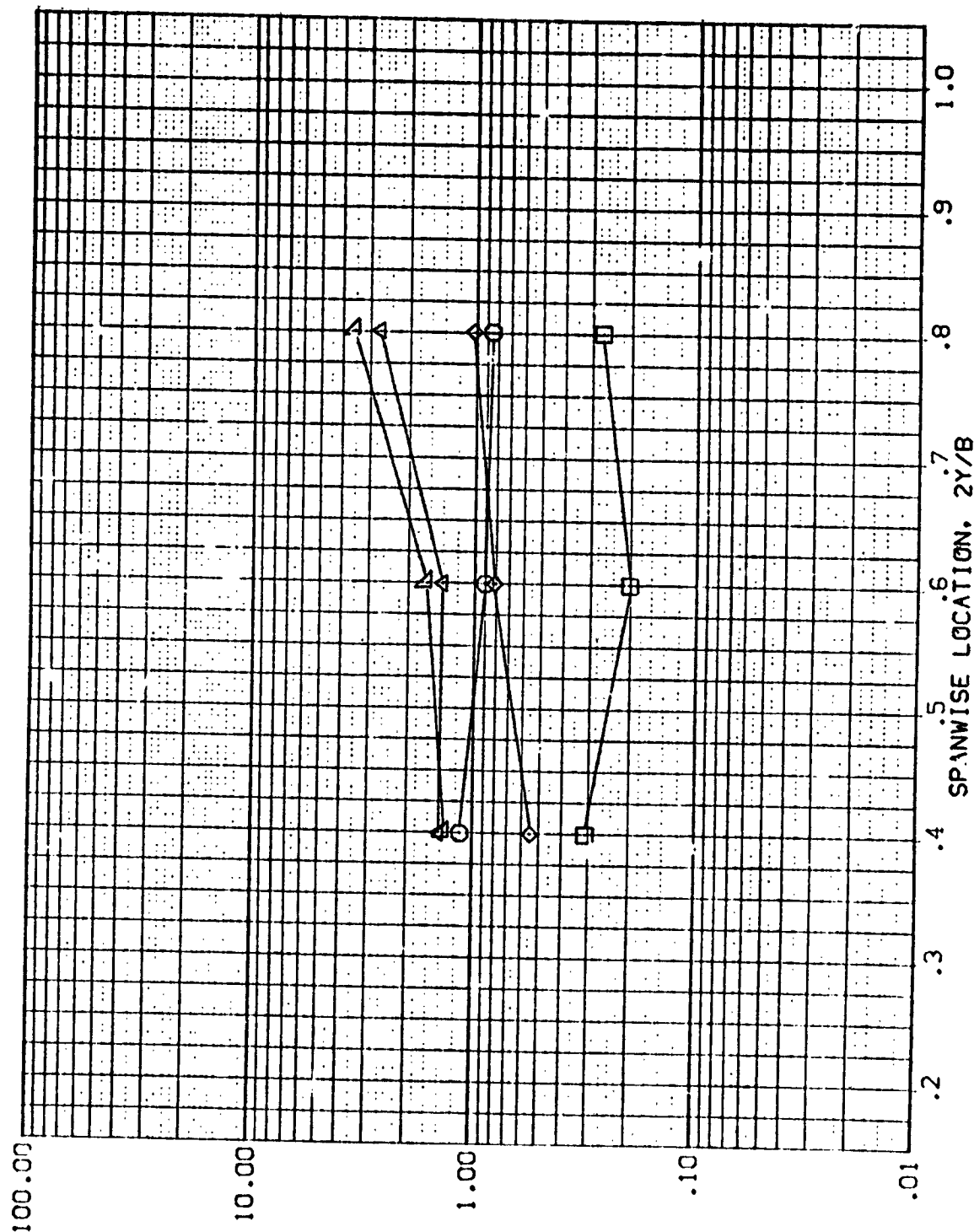
MACH = 5.300 HAW/HT = .900 X/C = .600

DATA SET SYMBOL
 (BEVG01)
 (BEVG02)
 (BEVG03)
 (BEVG04)
 (BEVG05)

CONFIGURATION DESCRIPTION

WING 3.5-195 1428 01+11 WING UPPER SURFACE
 WING 3.5-195 1428 01+11 WING UPPER SURFACE
 WING 3.5-195 1428 01+11 WING UPPER SURFACE
 WING 3.5-195 1428 01+11 WING UPPER SURFACE
 WING 3.5-195 1428 01+11 WING UPPER SURFACE

ALPHA BETA RM/L
 .000 .000 1.000
 30.000 .000 1.000
 60.000 .000 1.000
 90.000 .000 1.000
 120.000 .000 1.000



RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT = .300 X/C = .800

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RM/L
(BEV601)	AMES 3.5-195 (M28 01+T1) WING UPPER SURFACE	.000	.000	1.000
(BEV609)	AMES 3.5-195 (M28 01+T1) WING UPPER SURFACE	-30.000	.000	1.000
(BEV608)	AMES 3.5-195 (M28 01+T1) WING UPPER SURFACE	-60.000	.000	1.000
(BEV607)	AMES 3.5-195 (M28 01+T1) WING UPPER SURFACE	-90.000	.000	1.000
(BEV606)	AMES 3.5-195 (M28 01+T1) WING UPPER SURFACE	-120.000	.000	1.000

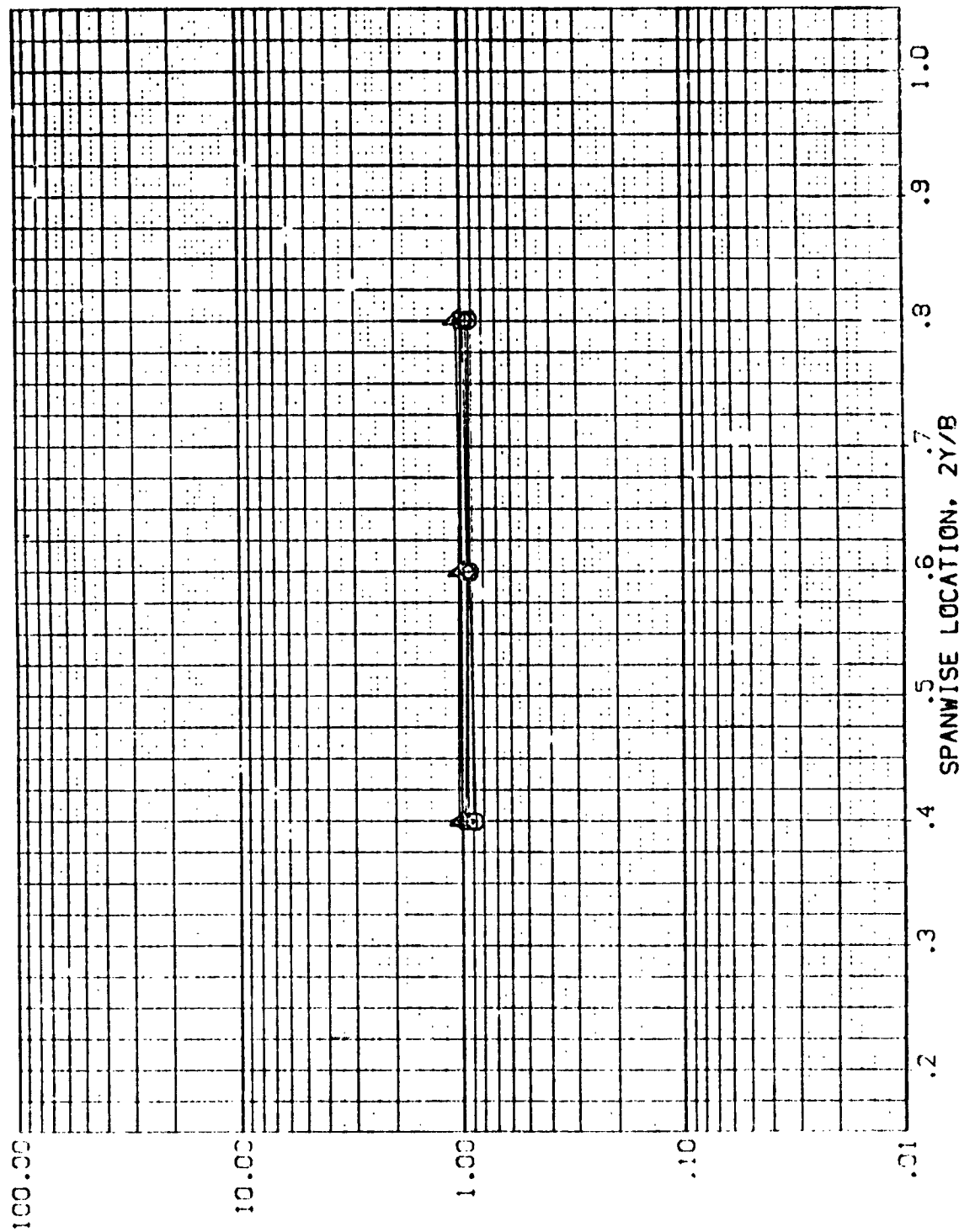


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

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ACH = 5.300 HA/HU = .900 X/C = .200

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEV301)	AMES 3.5:195 128 01*11 WING UPPER SURFACE	.000	.000	1.000
(BEV309)	AMES 3.5:195 128 01*11 WING UPPER SURFACE	-30.000	.000	1.000
(BEV308)	AMES 3.5:195 128 01*11 WING UPPER SURFACE	-60.000	.000	1.000
(BEV307)	AMES 3.5:195 128 01*11 WING UPPER SURFACE	-90.000	.000	1.000
(BEV306)	AMES 3.5:195 128 01*11 WING UPPER SURFACE	-120.000	.000	1.000

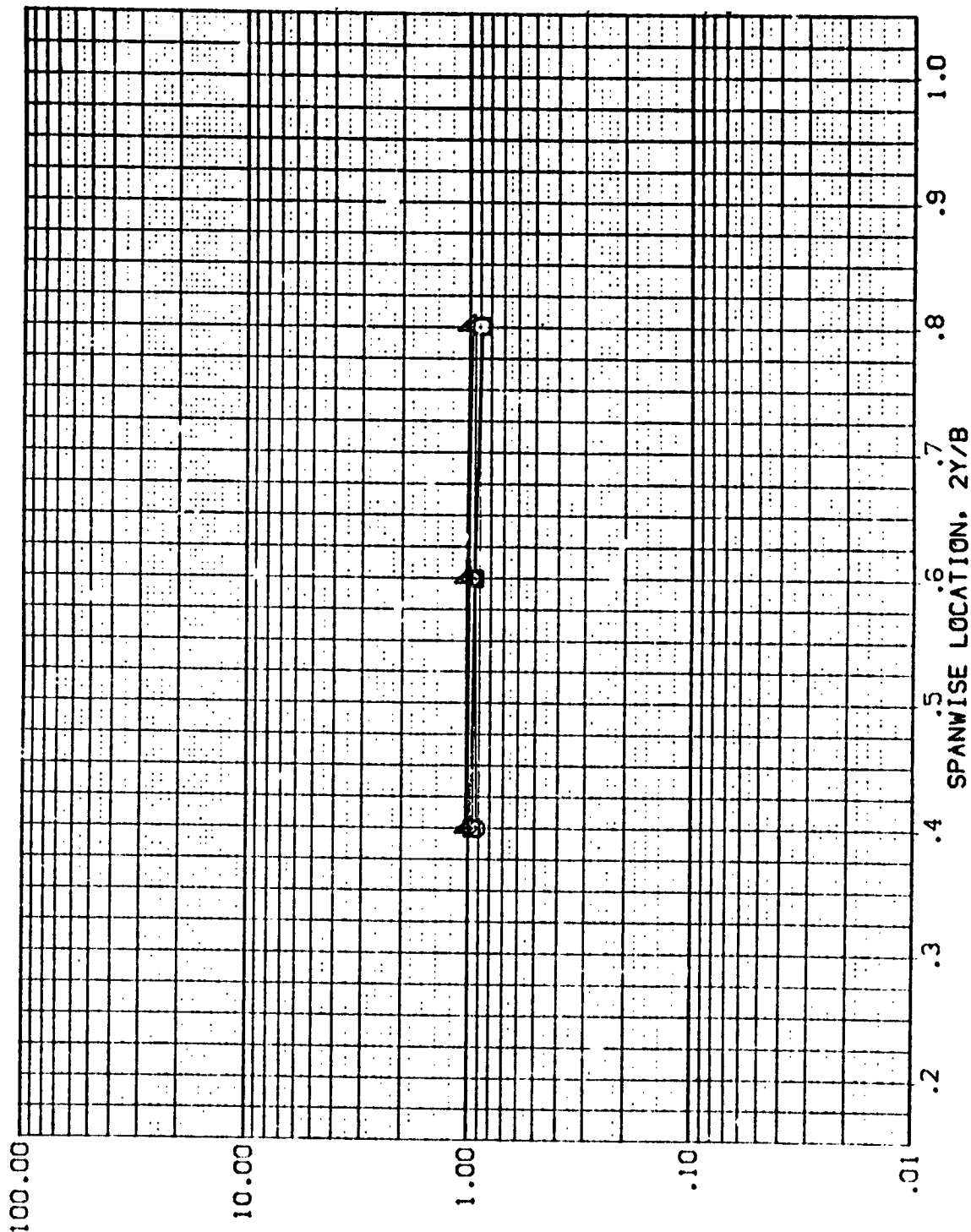


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

REYNOLDS NUMBER = 5.300 $h_{AW}/h_T = .900$ $X/C = .400$

DATA SET SYMBOL CONFIGURATION DESCRIPTION

01	AMES 3.5-195	H28	01+11	WING	UPPER SURFACE
02	AMES 3.5-195	H28	01+11	WING	UPPER SURFACE
03	AMES 3.5-195	H28	01+11	WING	UPPER SURFACE
04	AMES 3.5-195	H28	01+11	WING	UPPER SURFACE
05	AMES 3.5-195	H28	01+11	WING	UPPER SURFACE

ALPHA	BETA	RM/L
.000	.000	1.000
-30.000	.000	1.000
-60.000	.000	1.000
-90.000	.000	1.000
-120.000	.000	1.000

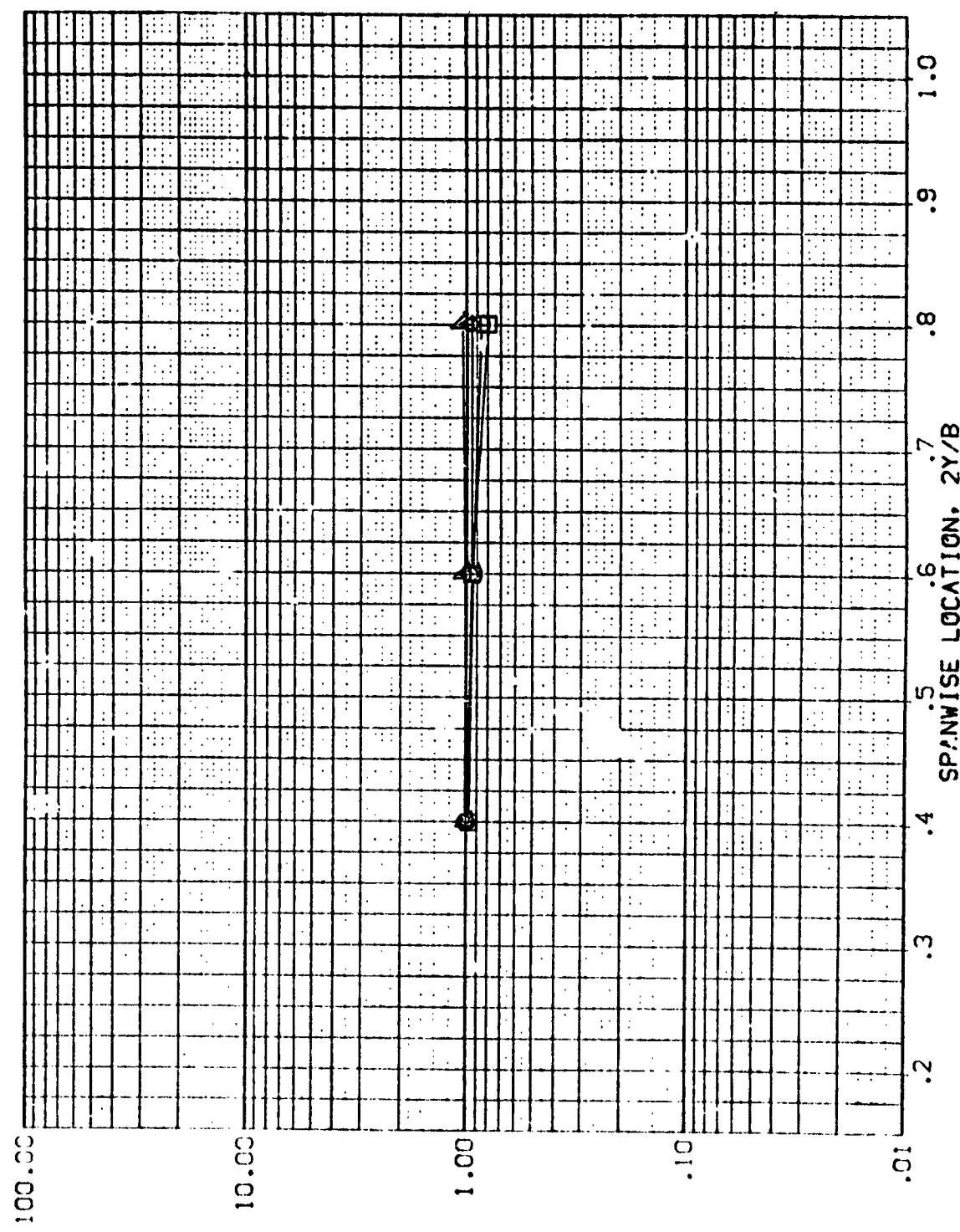


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

REACH = 5.300 HAW/HT = .300 X/C = .300 PAGE 1138

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

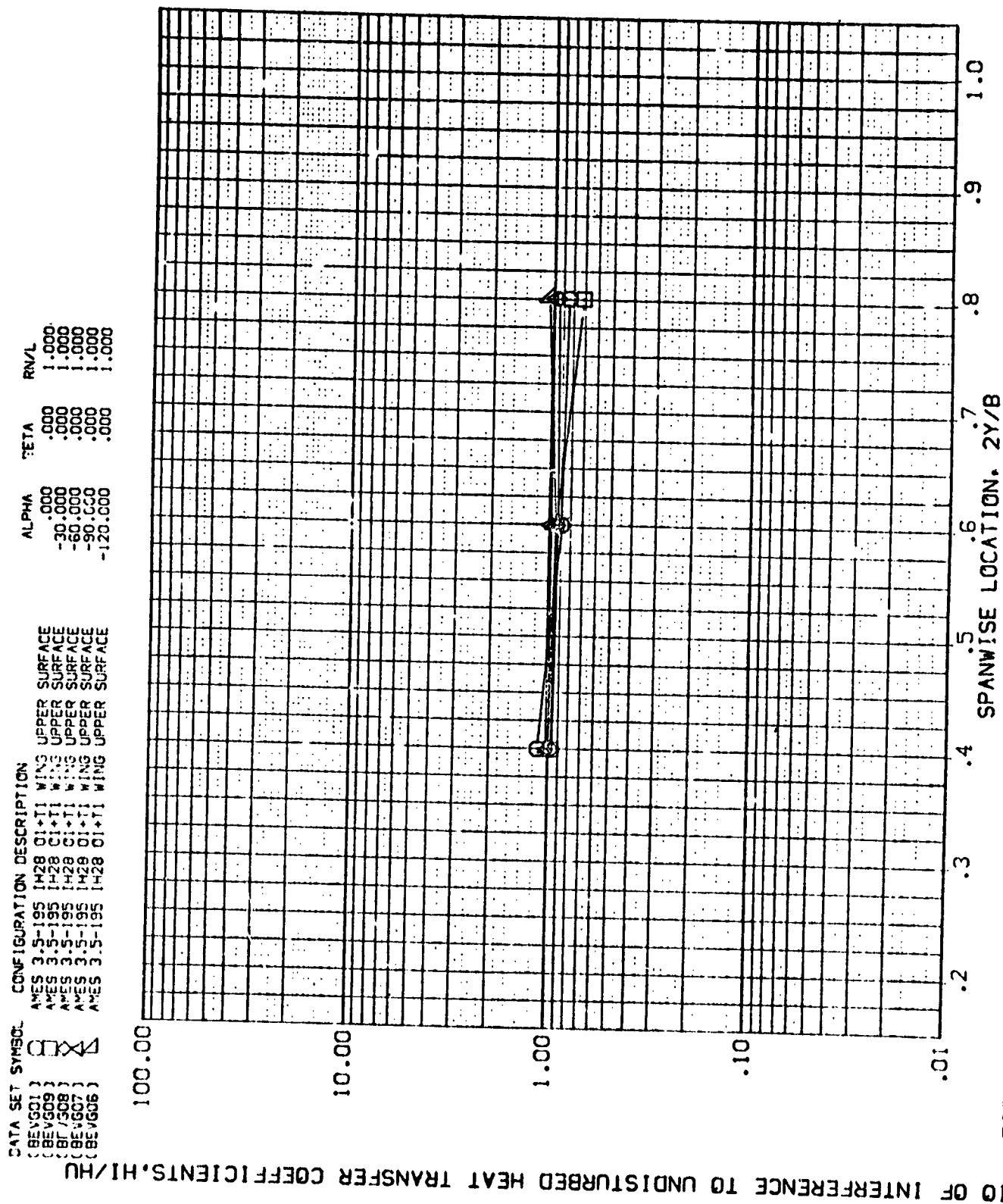


FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, H_I/H_U

$M_{\infty} = 5.300$ $HAW/HT = .900$ $X/C = .800$

AMES 3.5-195 IH28 01 VERTICAL TAIL

(KEVH19)

SYMBOL
◇ □

HAW/HT Z MACH
.85C 596.000 5.220
.900
1.000

PARAMETRIC VALUES
ALPHA R_N/L BETA
1.000 .000 .000

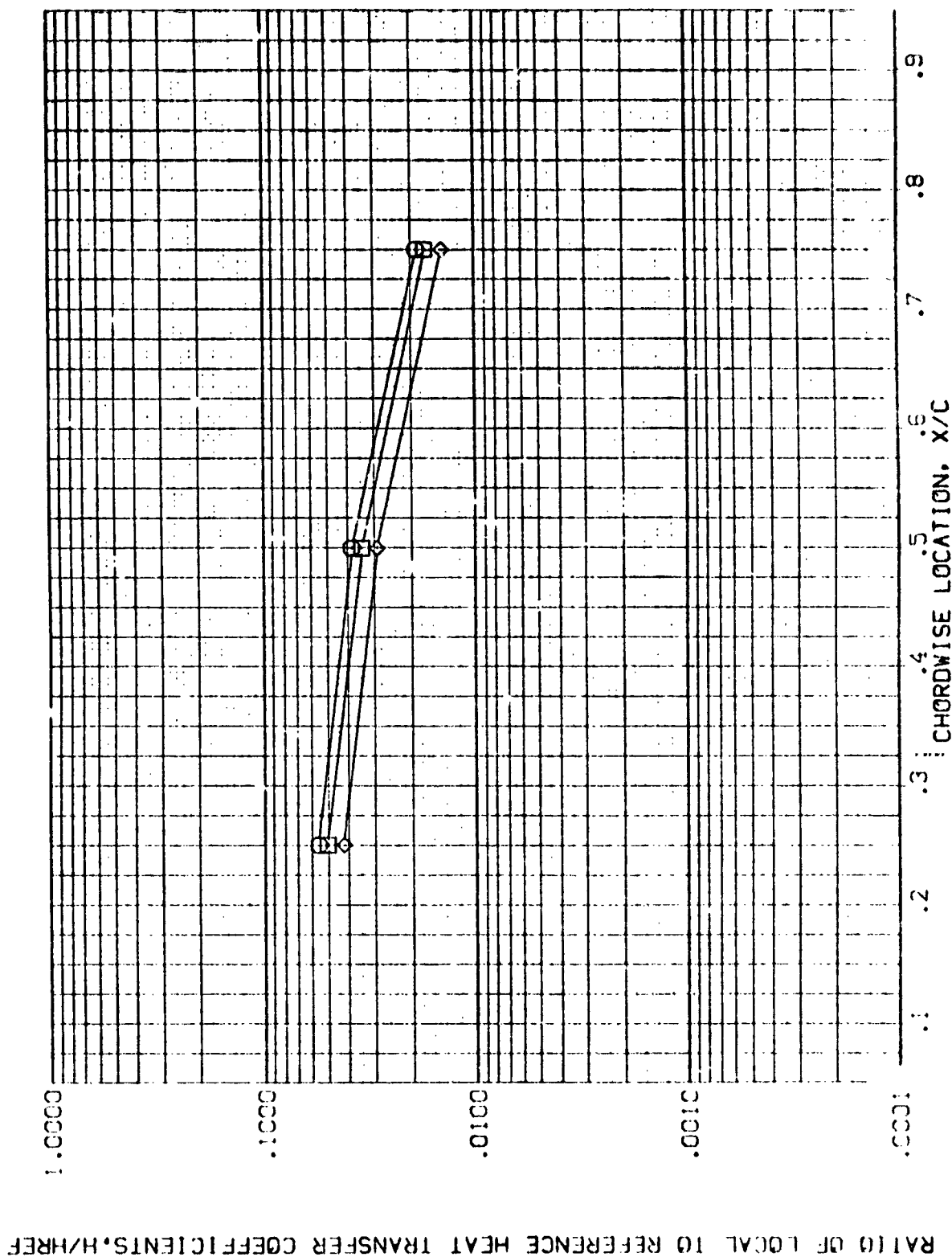


FIG. 25 VERTICAL TAIL, ORBITER ALONE

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH19)

SYMBOLS
 HAW/HT
 .850
 .900
 1.000

Z
 736.670
 5.220

PARAMETRIC VALUES
 ALPHA
 RN/L
 .000
 1.000
 BETA
 .000

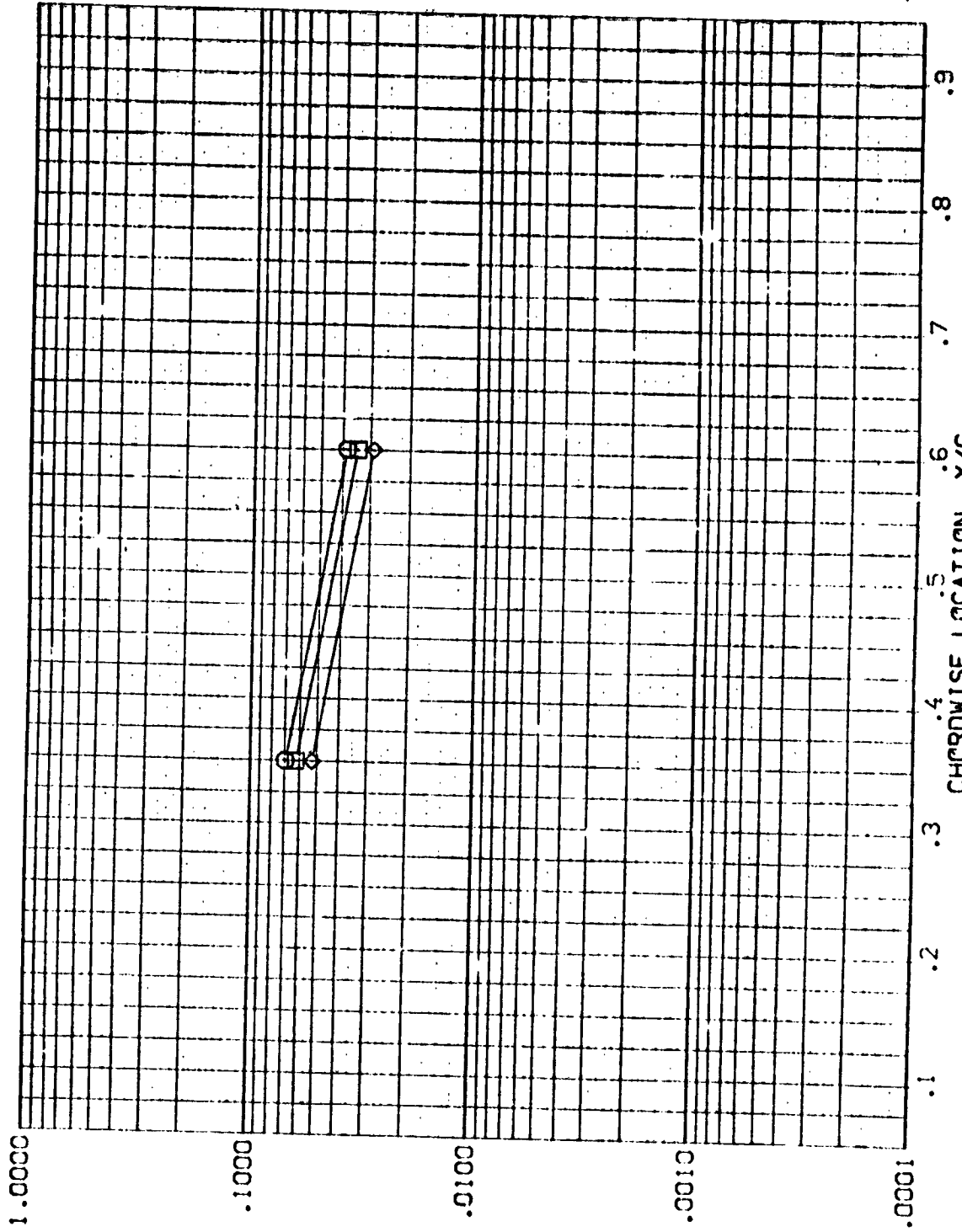


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH20)

SYMBOL HAW/HT Z MACH
 .850 596.000 5.219
 .900
 1.000

PARAMETRIC VALUES
 ALPHA 1.000
 BETA 1.000
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

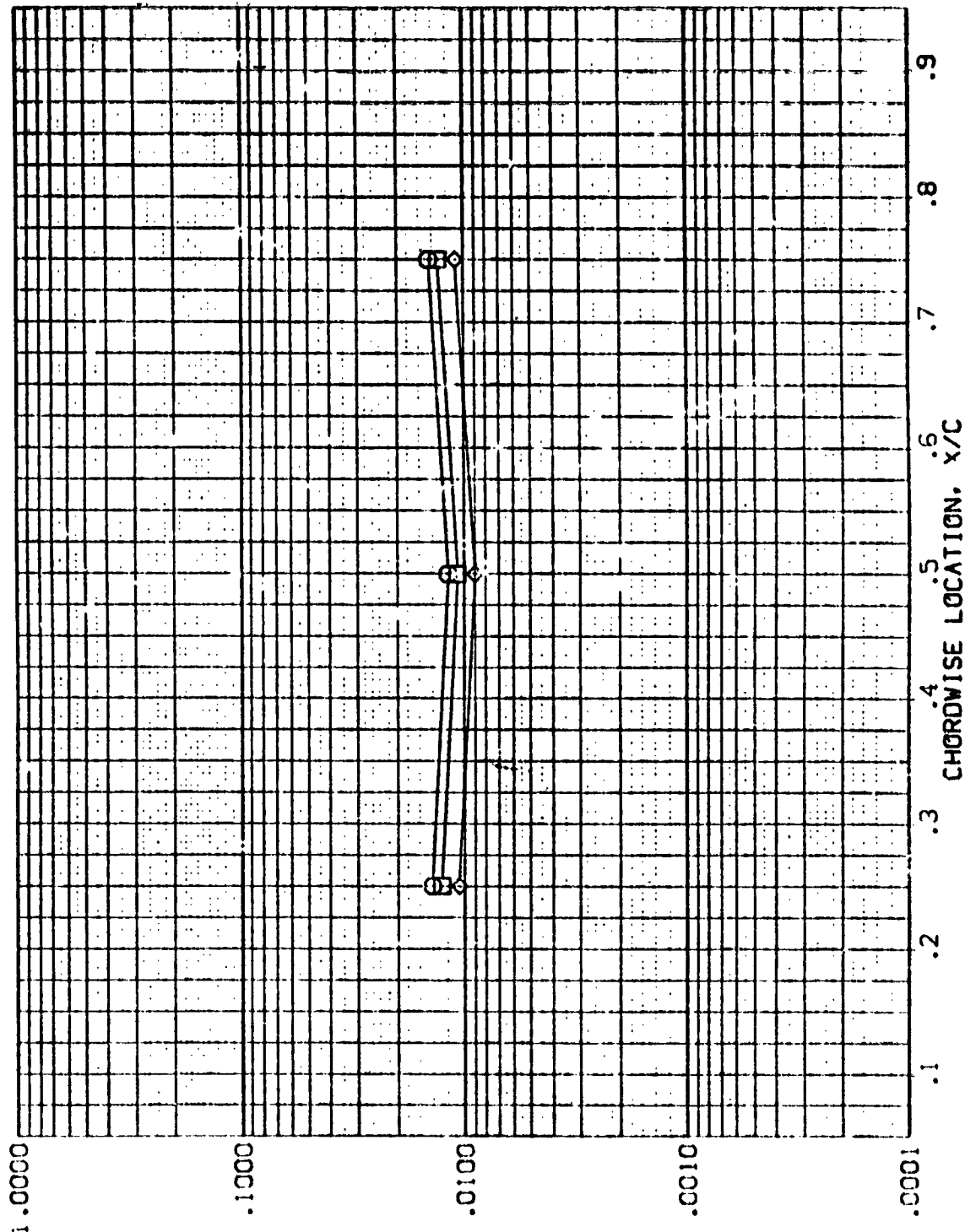


FIG. 25 VERTICAL TAIL, ORBITER ALONE

(KEVH20)

AMES 3.5-195 IH28 01

VERTICAL TAIL

SYMBOL
 \square
 \diamond

HAU/HT	Z	MACH
.850	736.670	5.219
.900		
1.000		

PARAMETRIC VALUES	
ALPHA	BETA
30.000	1.000
RN/L	.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

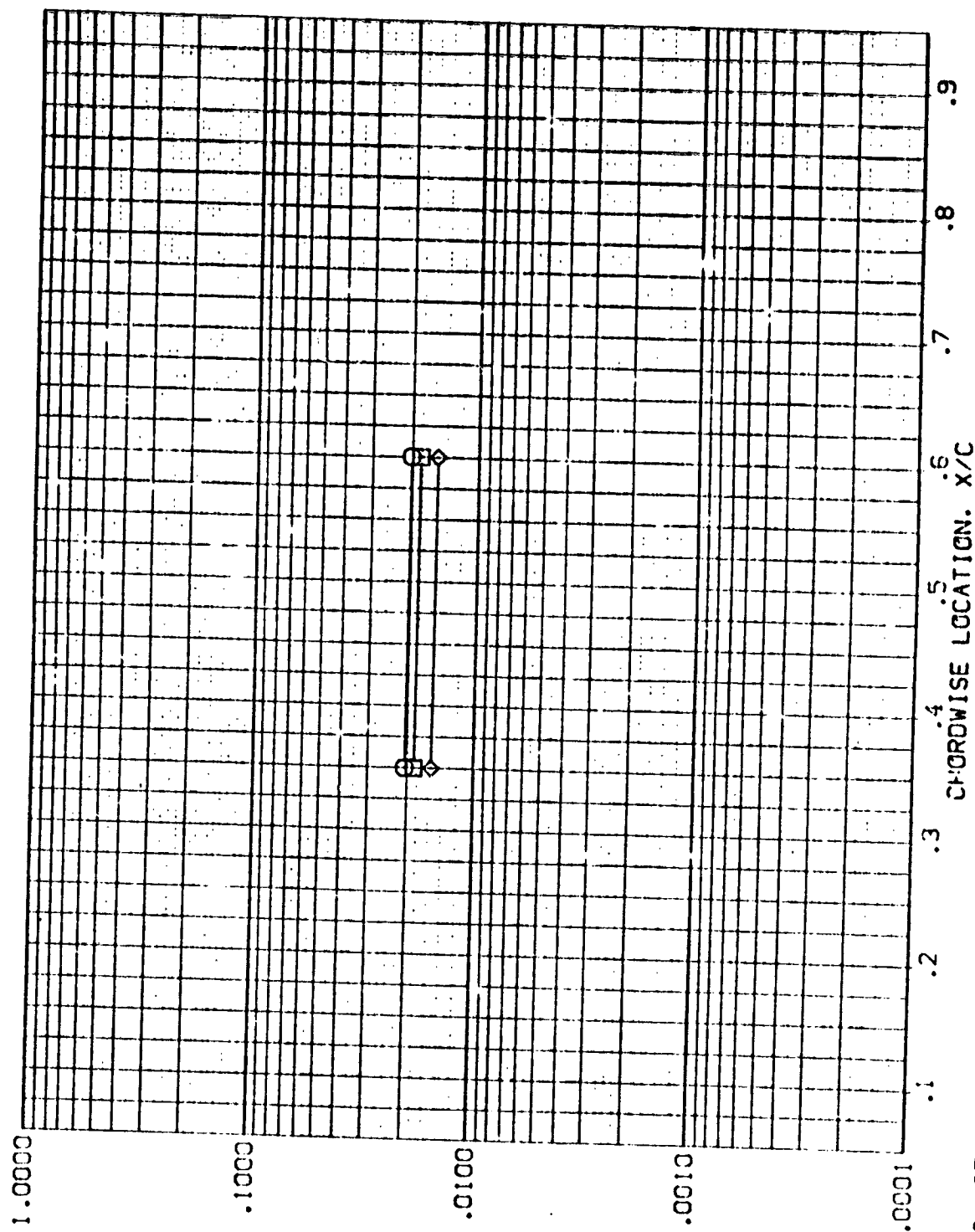


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01

VERTICAL TAIL

(KEVH21)

SYMBOL
◇

WAVE/HT Z MACH
.850 596.000 5.220
.900
1.000

PARAMETRIC VALUES
ALPHA 63.000 BETA .000
R/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

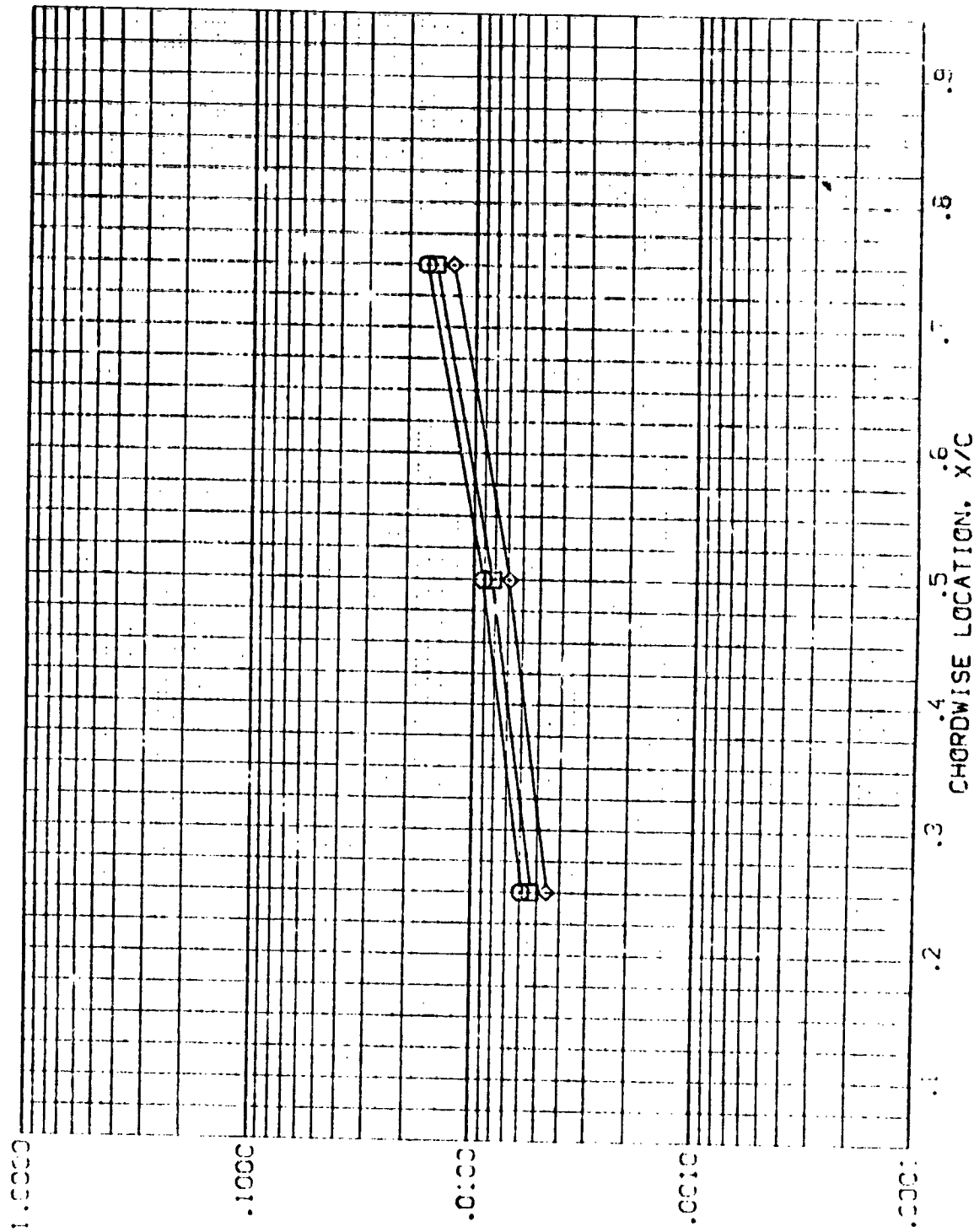


FIG. 25 VERTICAL TAIL, ORBITER ALONE

(KEVH21)

VERTICAL TAIL

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
ALPHA 6.000 BETA 1.000
RN/L .000

SYMBOL MAN/HT Z MACH
◇ .850 736.670 5.220
◇ .900
◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

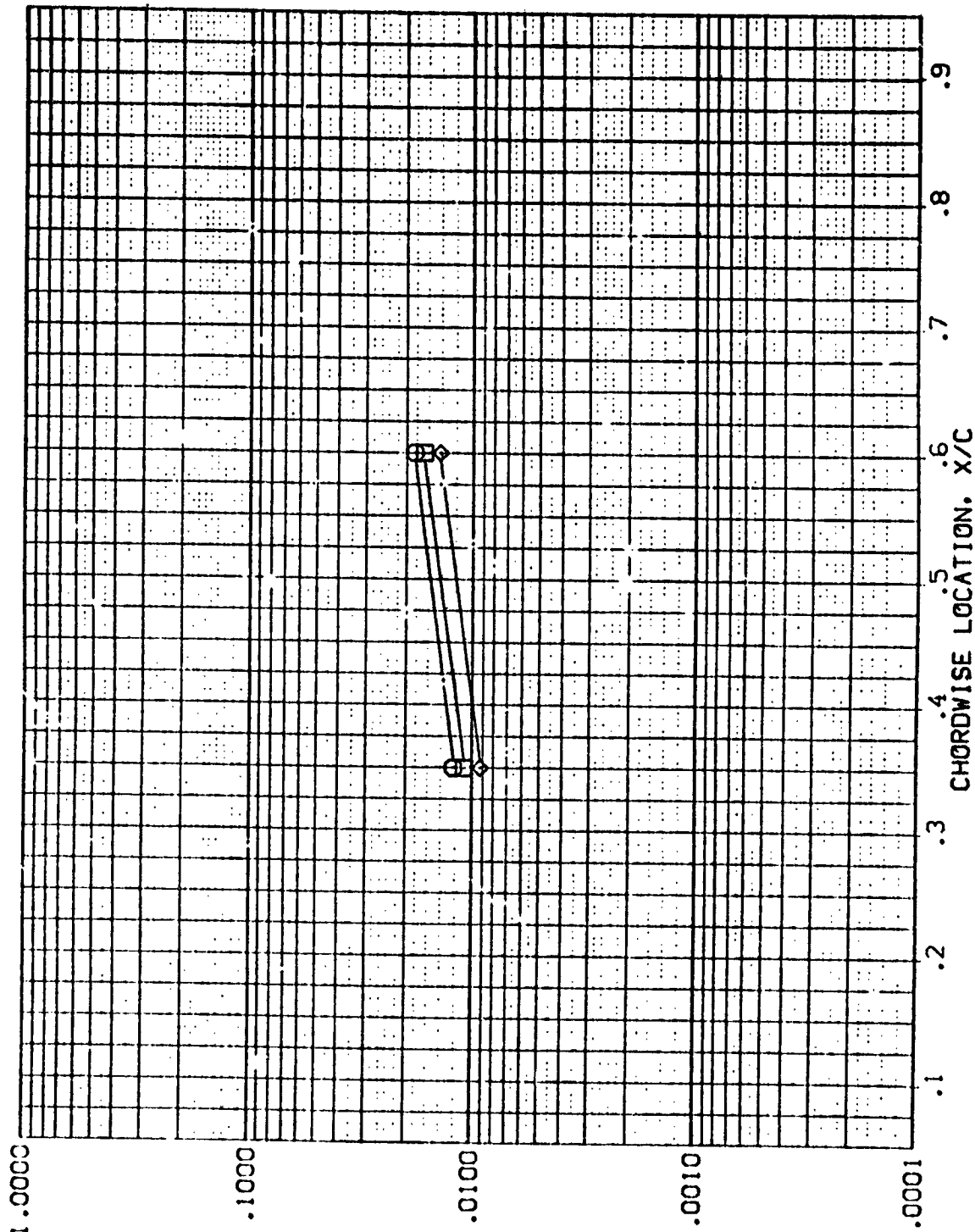


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 (KEVH22)

VERTICAL TAIL

AMES 3.5-195 IH28 01

SYMBOL
◇
□
○

HAW/HT Z MACH
.850 596.000 5.220
.900
1.000

PARAMETRIC VALUES
90.000 BETA .000
1.000

ALPHA
RN/L

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

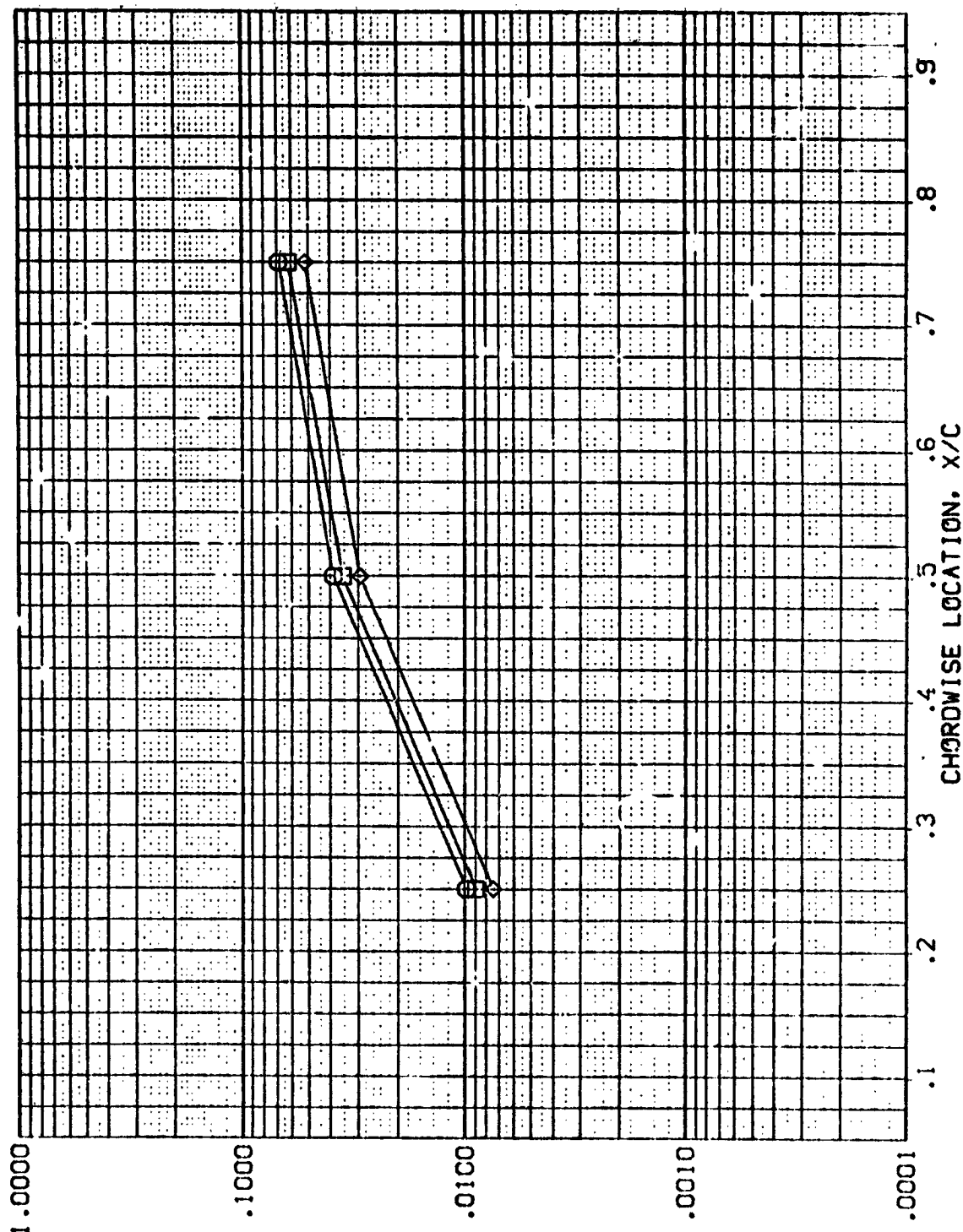


FIG. 25 VERTICAL TAIL, ORBITER ALONE

(KEVH22)

VERTICAL TAIL

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
ALPHA 90.000 BETA .000
RN/L 1.000

SYMBOL HAW/HT Z MACH
□ .850 736.670 5.220
◇ .900 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

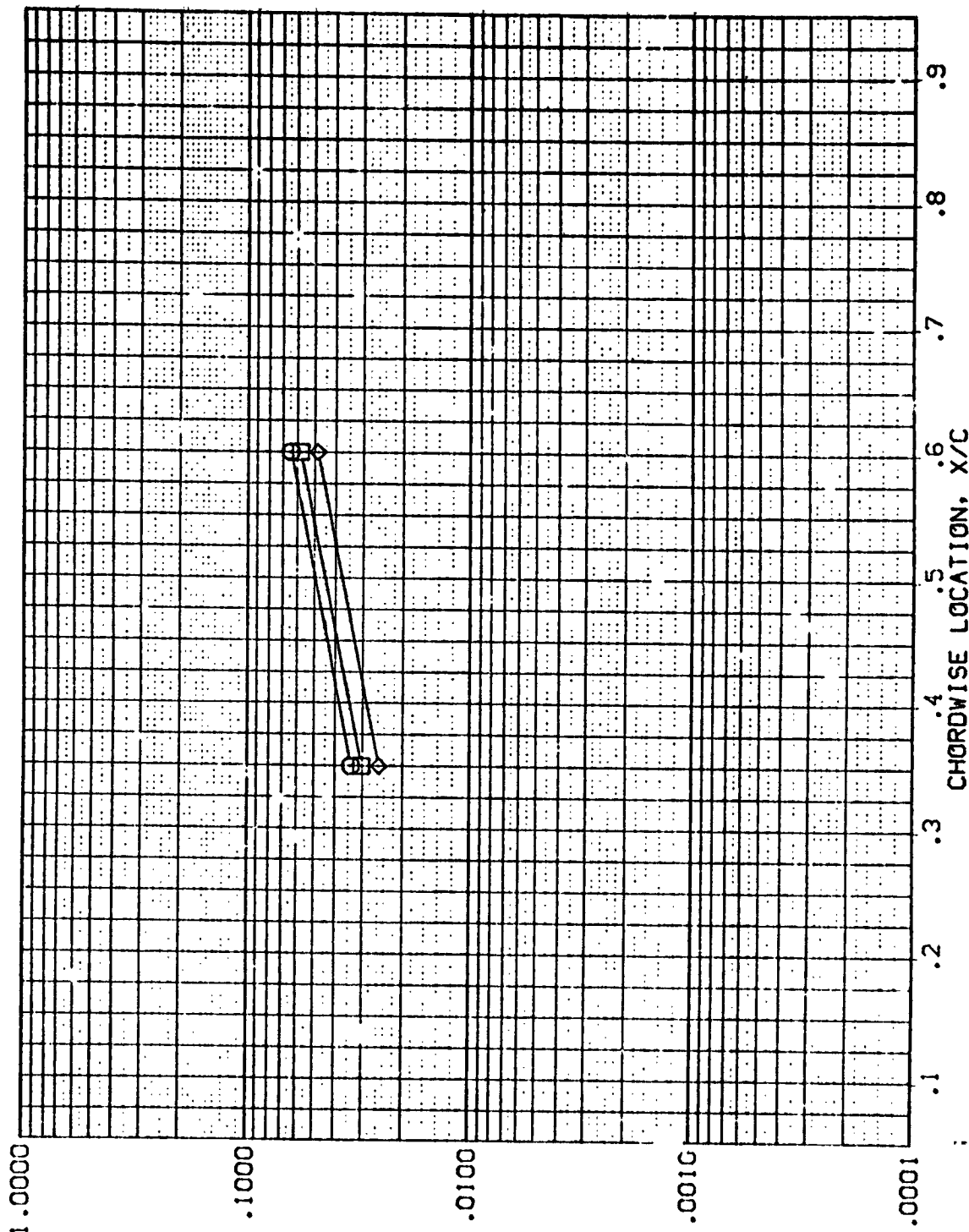


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KE 'H23)

SYMBOL	HAW/HT	Z	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
◇	.850	596.000	5.220	120.000	.000
□	.900			1.000	
◇	1.000				

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

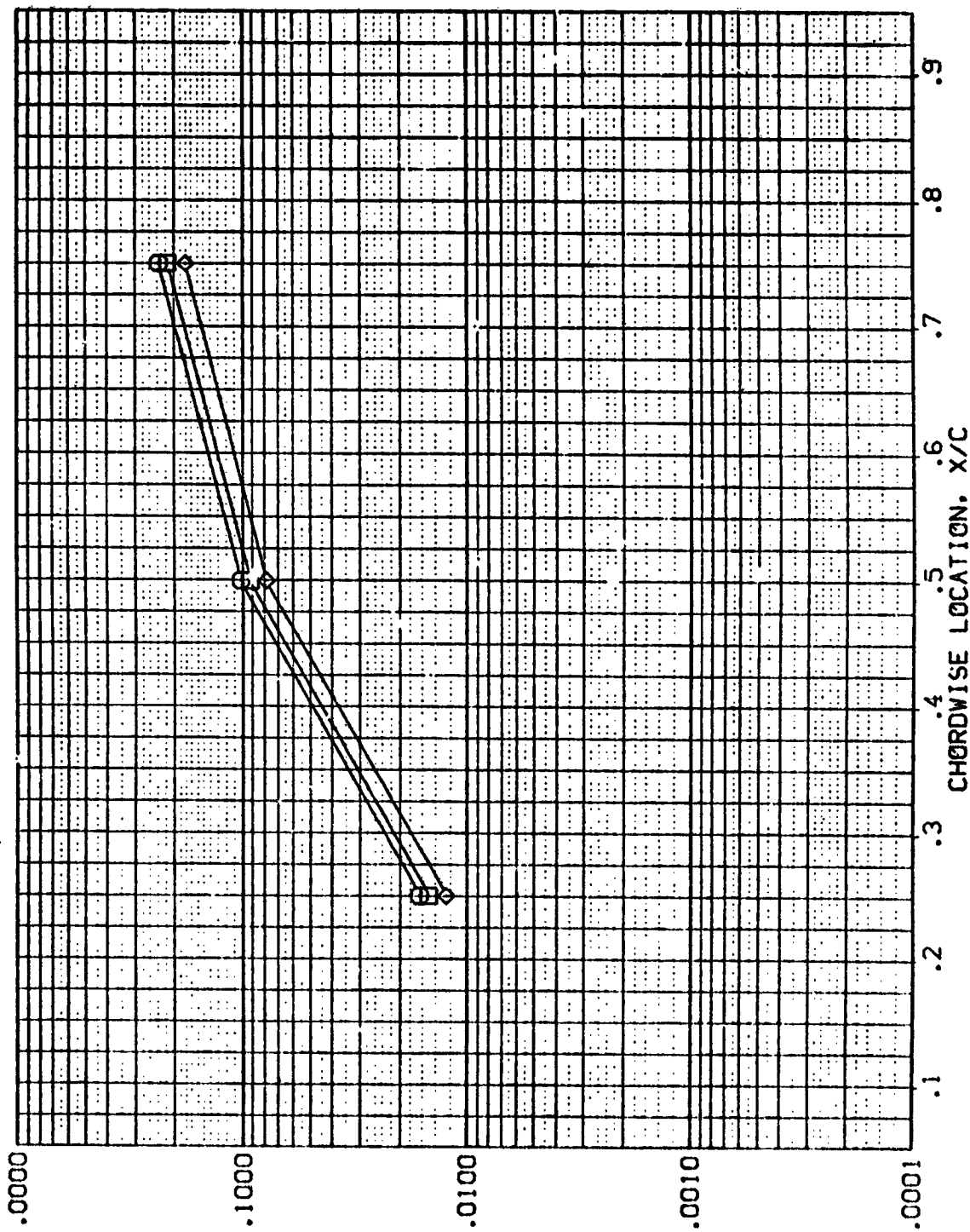


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH23)

SYMBOL	HAW/HT	Z	MACH	PARAMETRIC VALUES
◇	.850	736.670	5.220	ALPHA 120.000 BETA .000
□	.900			RN/L 1.000
◇	1.000			

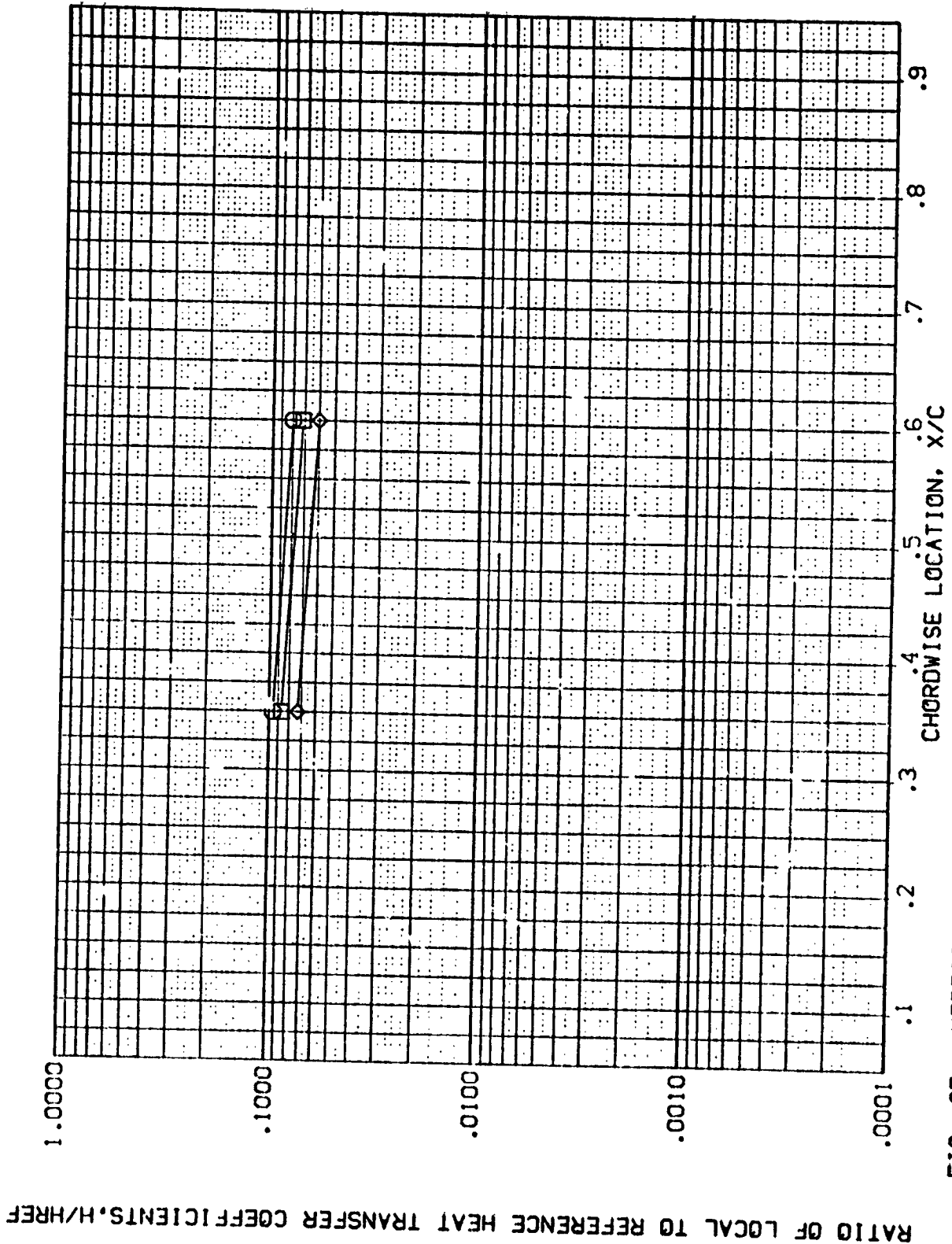


FIG. 25 VERTICAL TAIL, ORBITER ALONE

(KEVH24)

VERTICAL TAIL

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
ALPHA -120.700 BETA .000
RN/L 1.000

SYMBOL HAW/HT Z MACH
◇ .850 596.000 5.220
□ .900
◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/H_{REF}

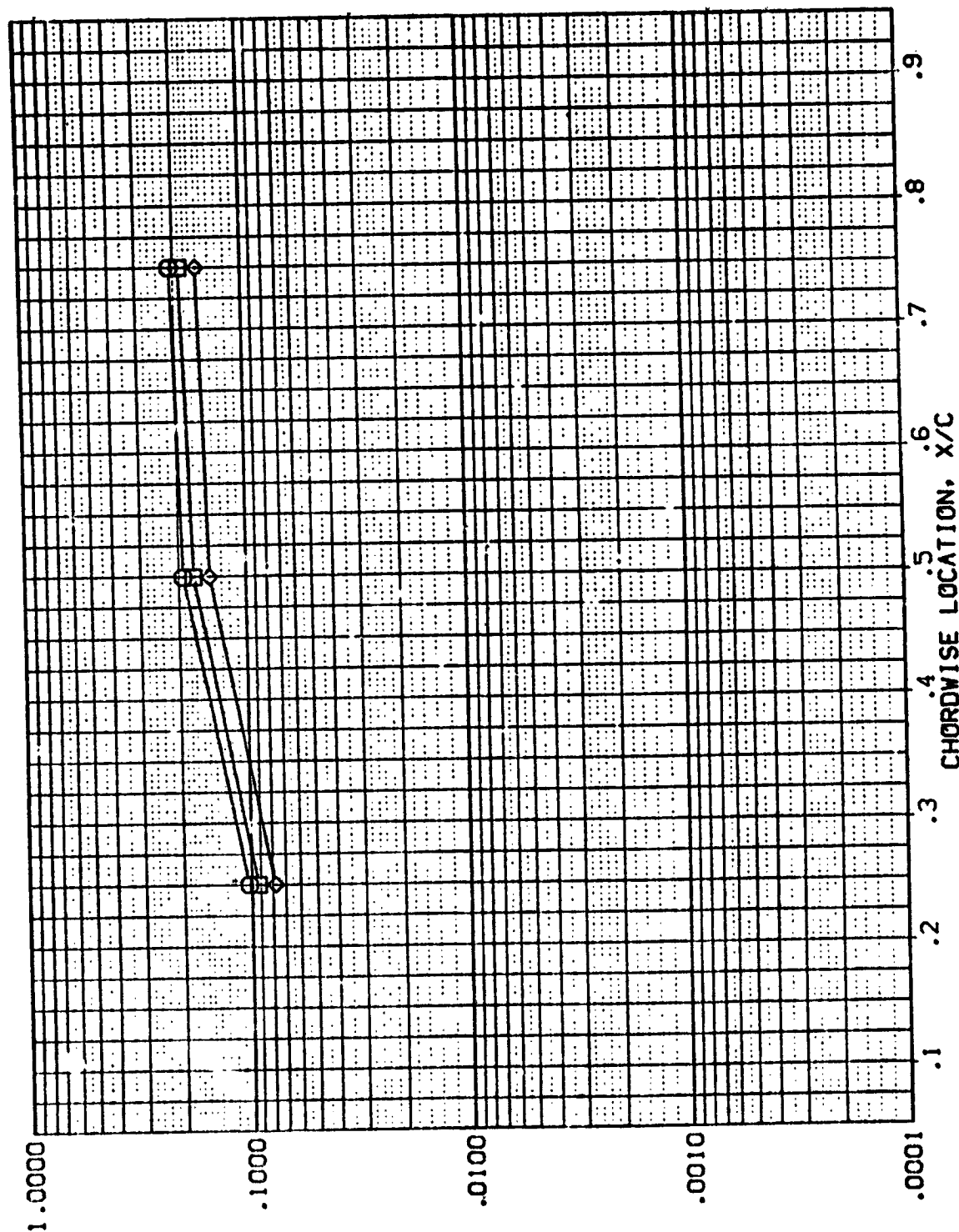


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH24)
 PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RV/L 1.000

SYMBOL HAW/HT Z MACH
 ◻ .850 736.670 5.220
 ◻ .900
 ◻ 1.000

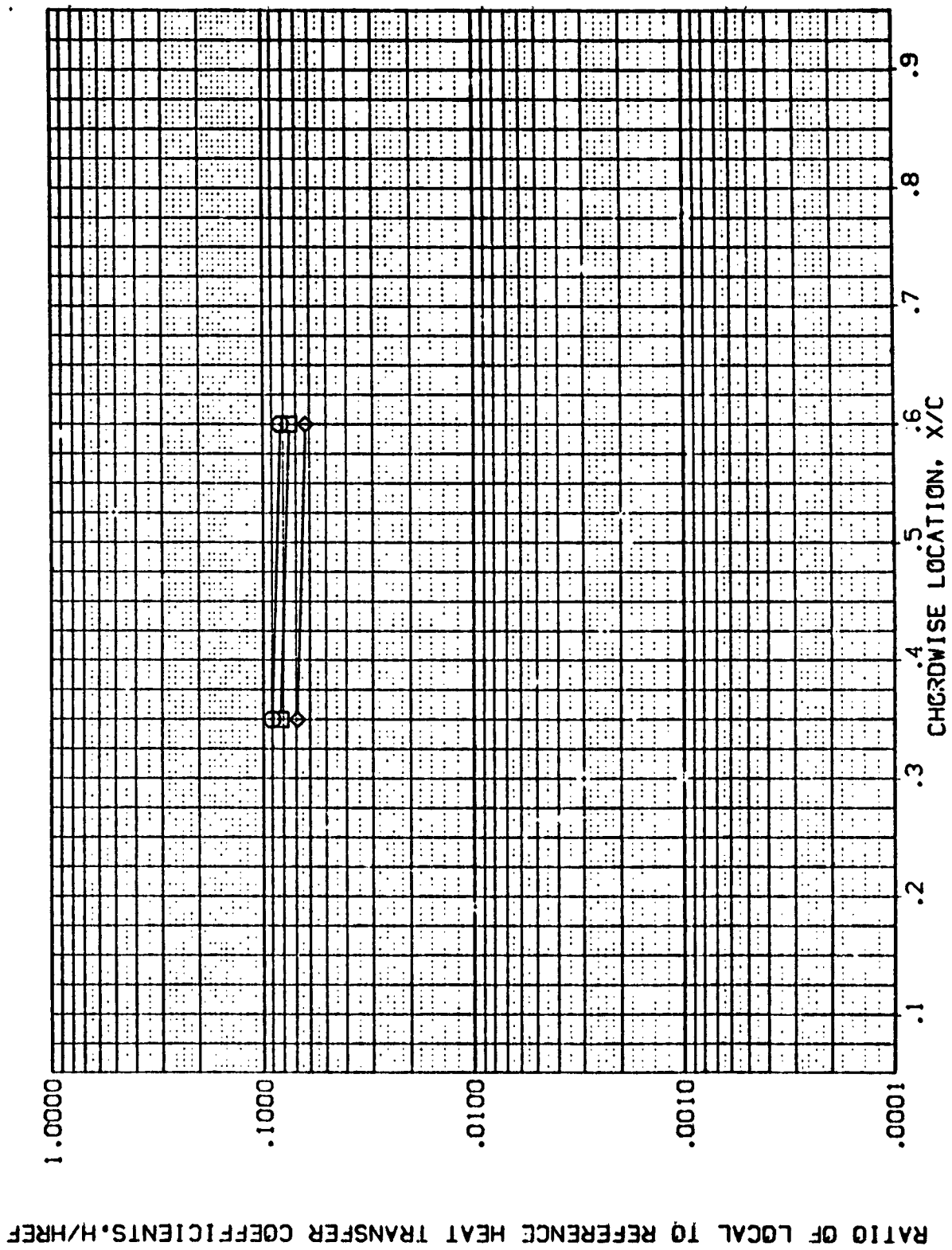


FIG. 25 VERTICAL TAIL, ORBITER ALONE

(KEVH25)

VERTICAL TAIL

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
-90.000 BETA .000
1.000

ALPHA
RN/L

MAW/HT Z MACH
.650 596.000 5.219
.900
1.000

SYMBOL
◇
□

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

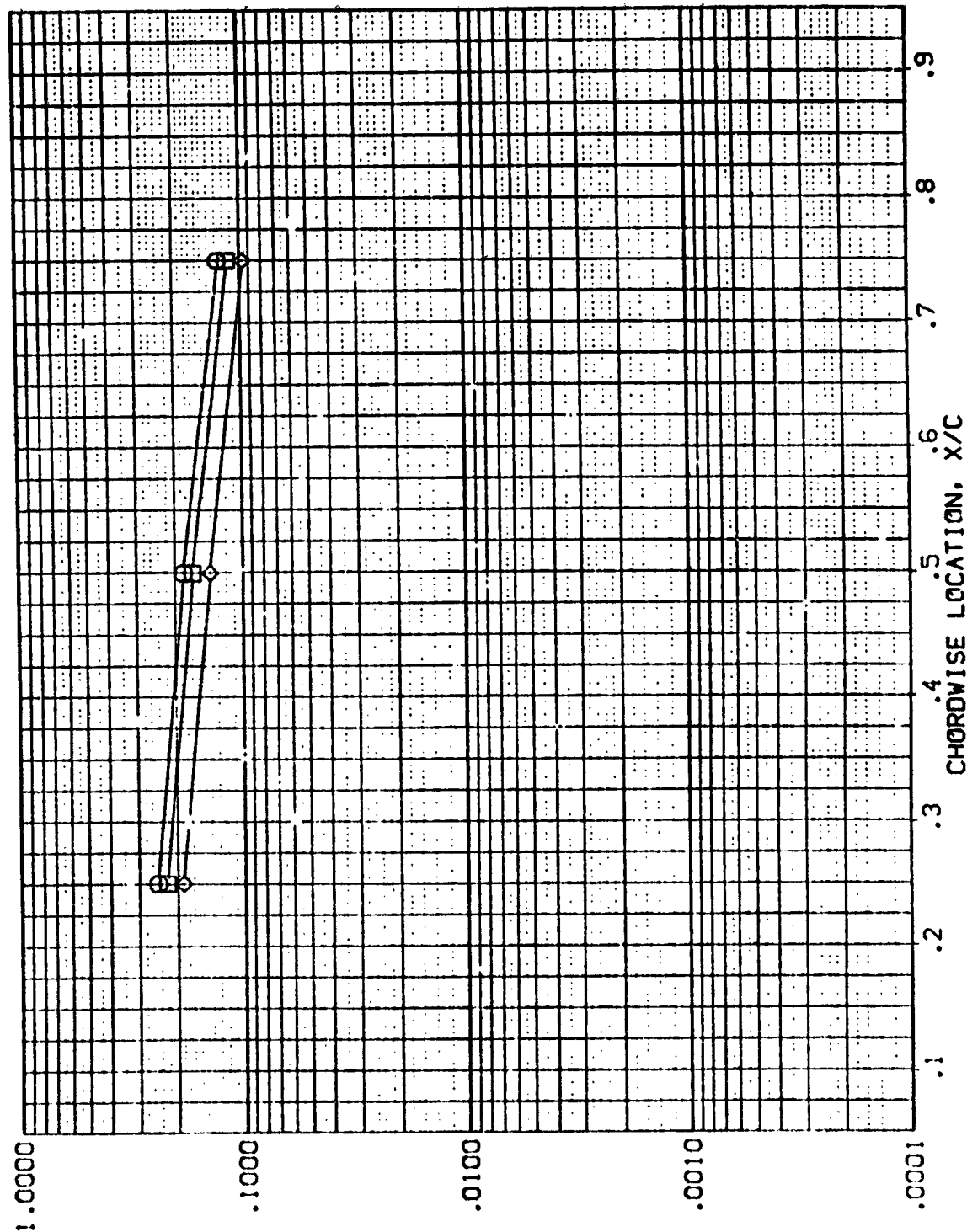


FIG. 25 VERTICAL TAIL, ORBITER ALONE

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH25)

SYMBOL	MAW/HT	Z	MACH	ALPHA	PARAMETRIC VALUES
◇	.850	736.670	5.219	RN/L	-90.730 BETA .000
□	.900				1.000
◇	1.000				

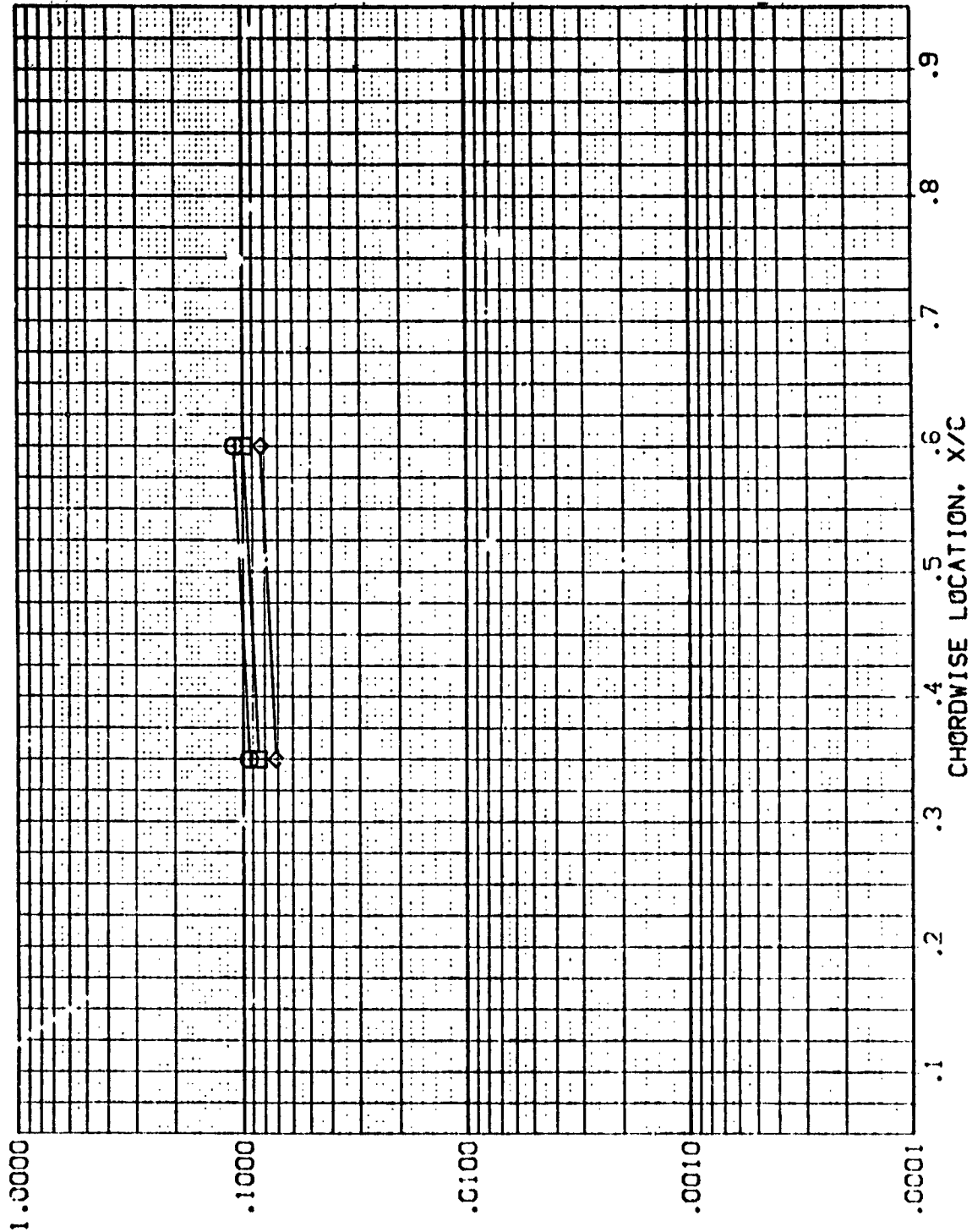


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH26)

SYMBOL	HAW/HT	Z	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
□	.850	596.000	5.220	-60.000	.000
◇	.900			1.000	
◇	1.000				

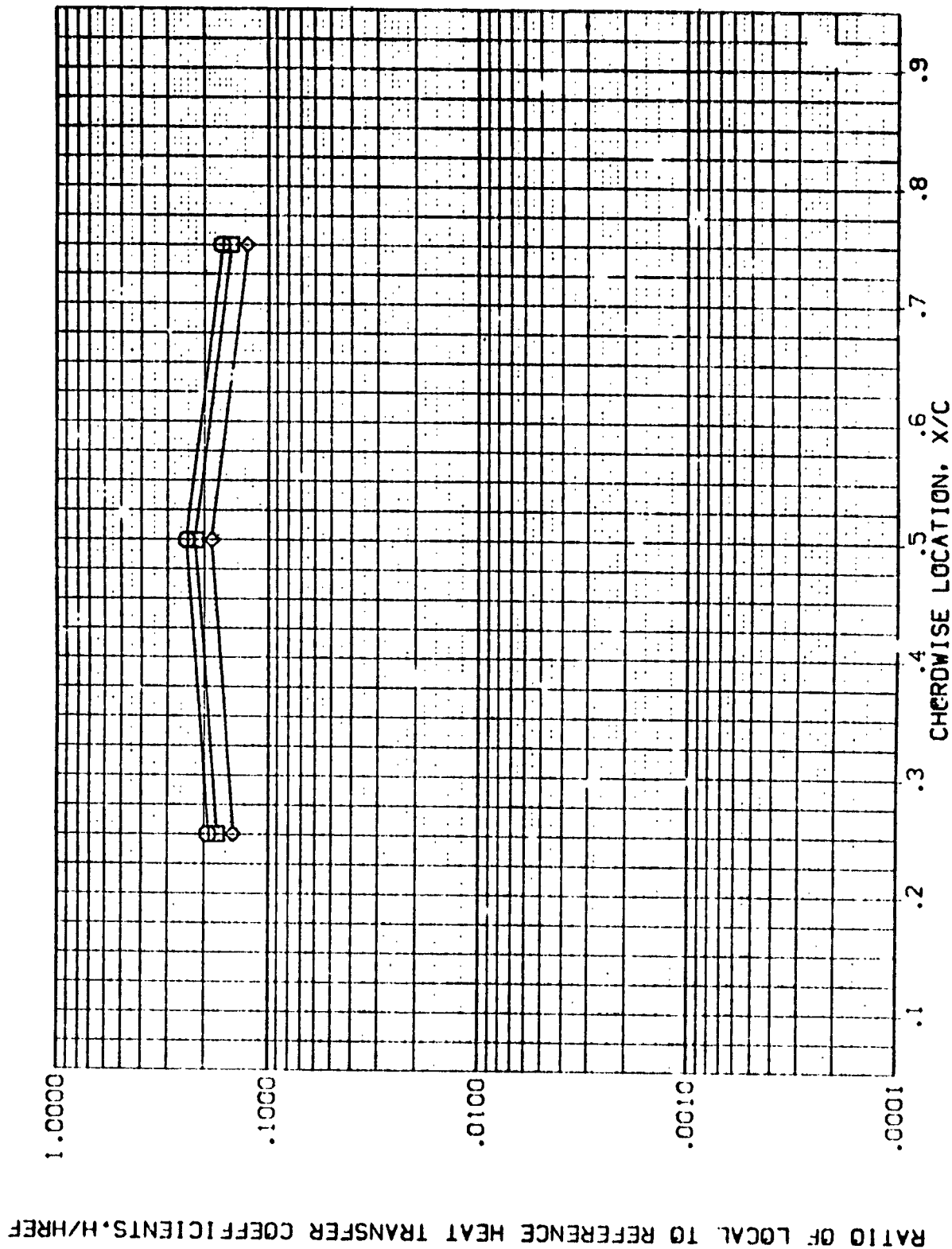


FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 1H28 01

MACH

5.220

ALPHA
RN/L

BETA

000-1

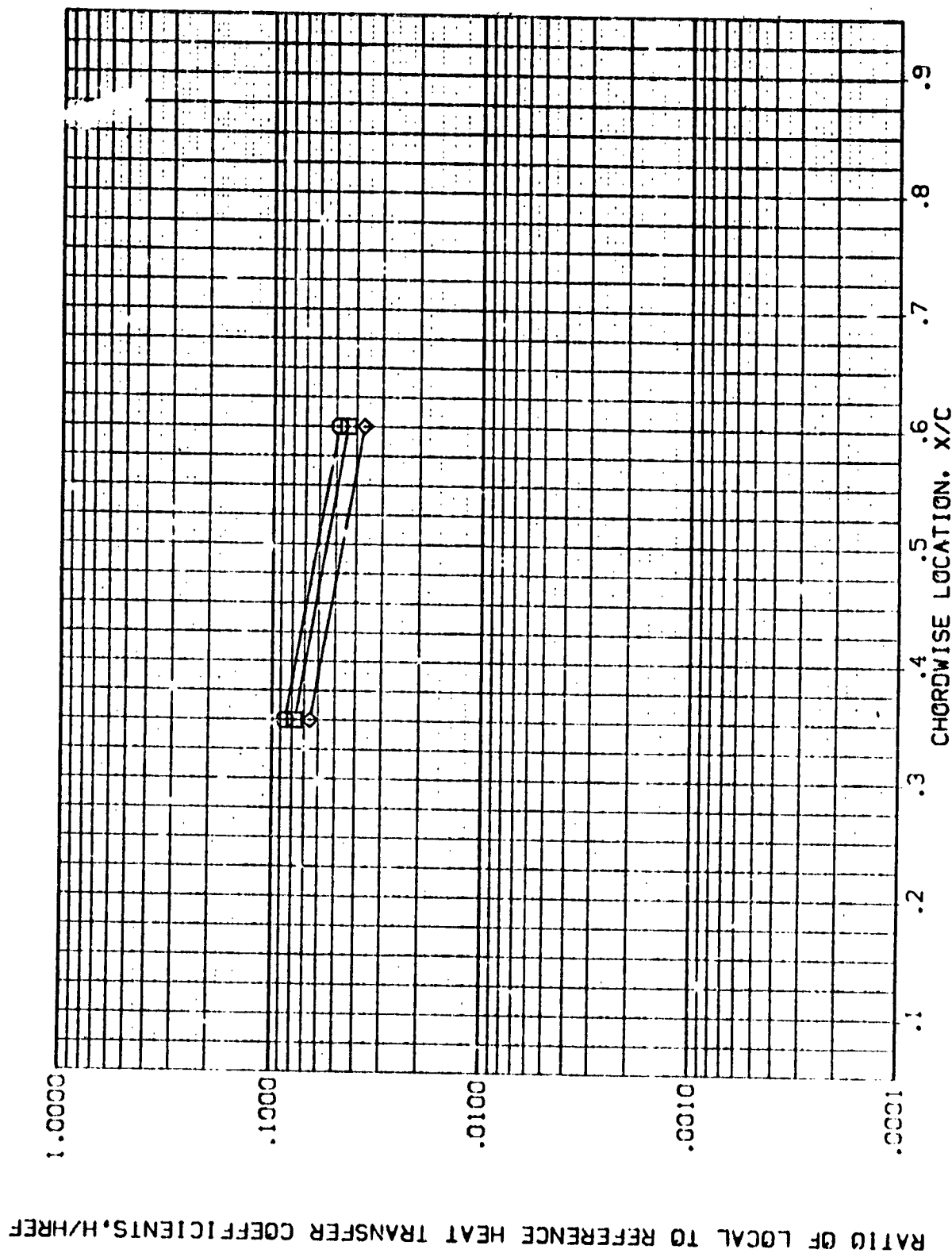


FIG. 25 VERTICAL TAIL, ORBITER ALONE

(KEVH27)

VERTICAL TAIL

AMES 3.5-195 IH28 01

SYMBOL
◇
□
○

HAW/H²
.950
.900
1.000

Z
596.000

MACH
5.220

PARAMETRIC VALUES
ALPHA
RN/L
-30.000
1.000
BETA
1.000
.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

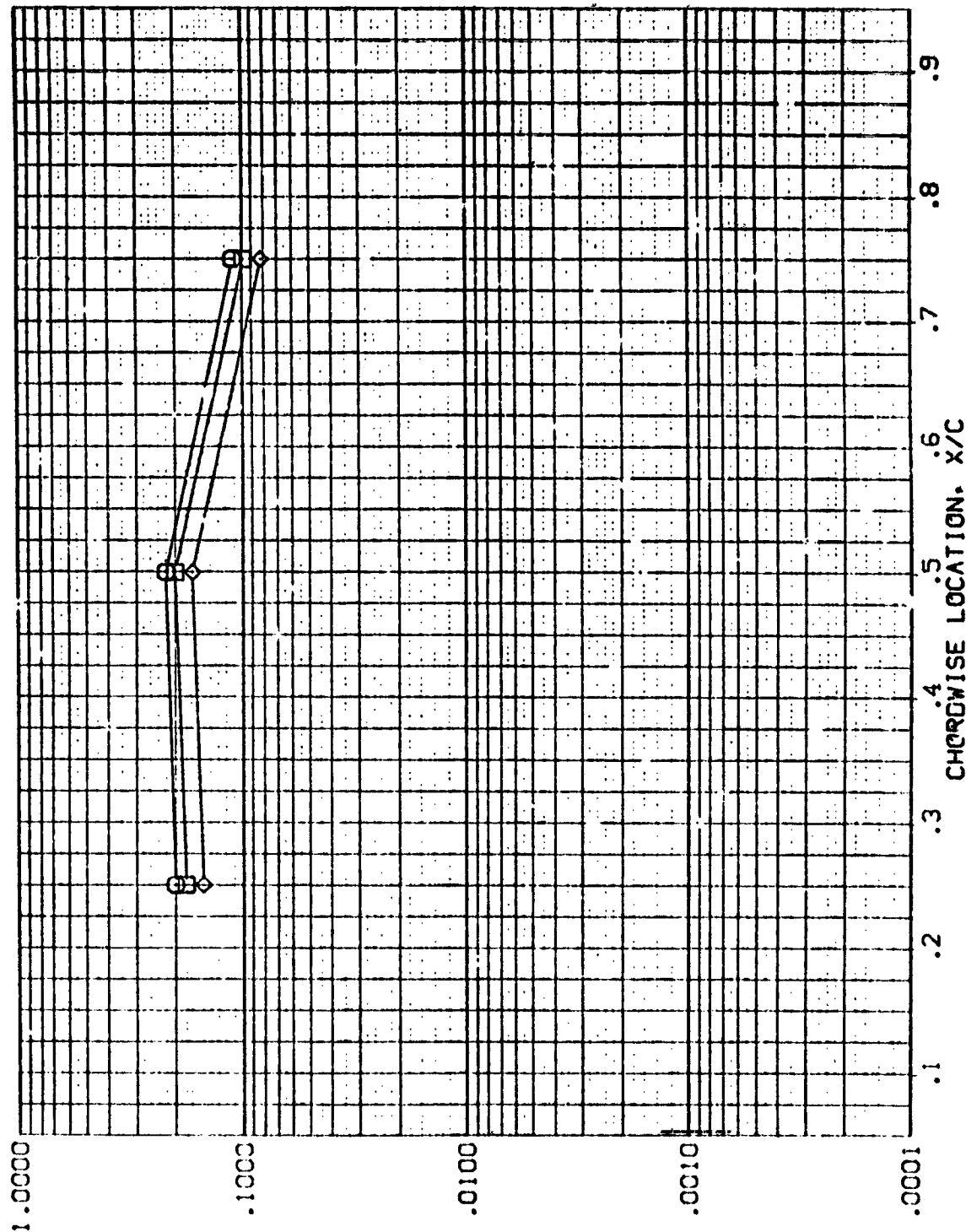


FIG. 25 VERTICAL TAIL, ORBITER ALONE

[KEVH27]

VERTICAL TAIL

AMES 3.5-195 IH28 01

PARAMETRIC VALUES
-30.000 BETA
1.000

ALPHA
RN/L

SYMBOL HAW/H_T Z MACH
◇ .650 736.670 5.220
□ .900
◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

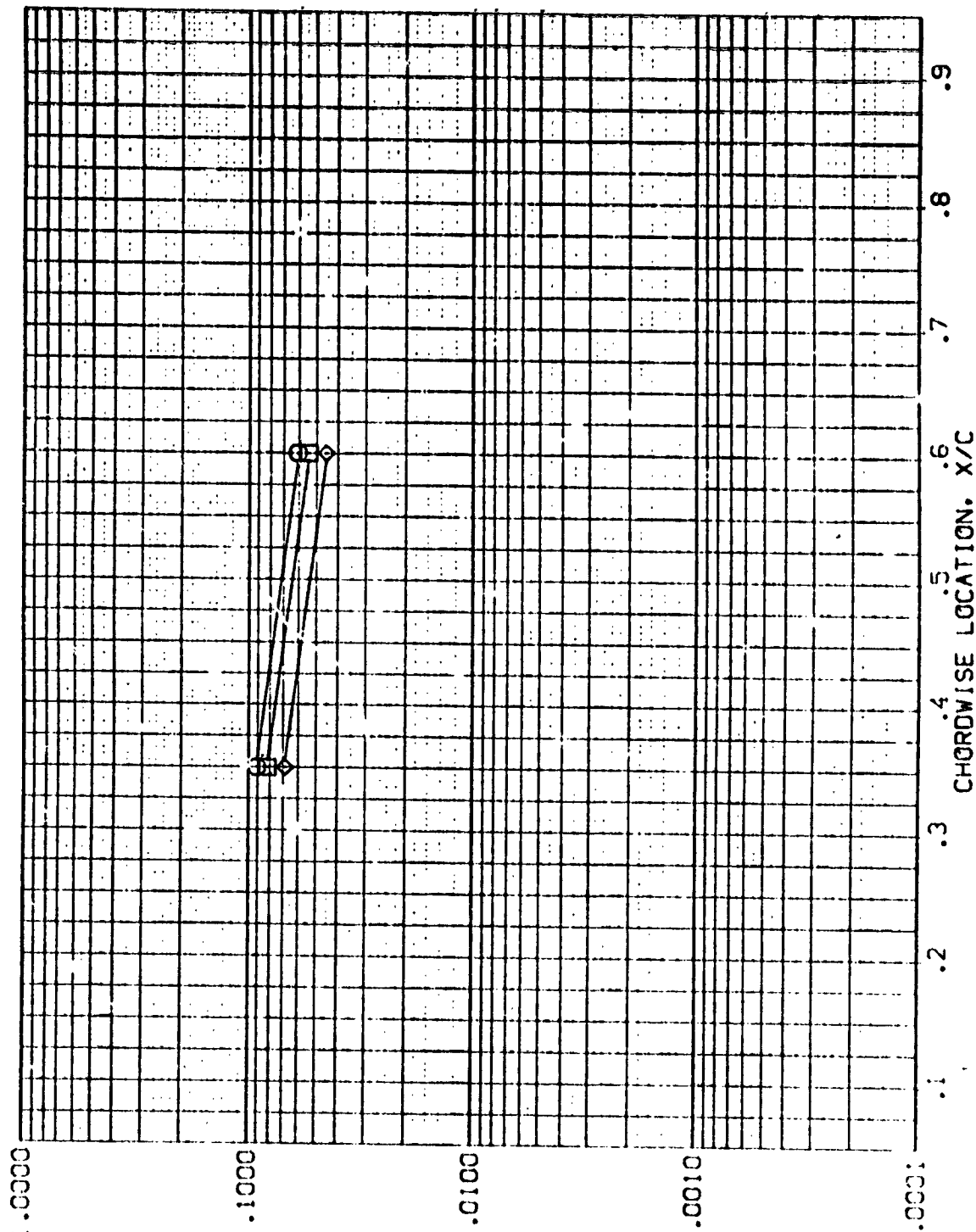
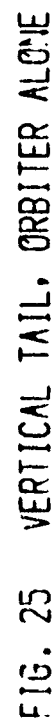


FIG. 25 VERTICAL TAIL, ORBITER ALONE

ALPHA	BETA	RN/L
.000	.000	1.000
30.000	.000	1.000
60.000	.000	1.000
90.000	.000	1.000
20.000	.000	1.000


$$\text{MAC}_{\text{I}} = 5.300 \quad \text{HAW/UT} = .900 \quad \text{Z} = 596.000$$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEV19)	AMES 3.5-195 IH28 01 VERTICAL TAIL	.000	.000	1.000
(KEV20)	AMES 3.5-195 IH28 01 VERTICAL TAIL	30.000	.000	1.000
(KEV21)	AMES 3.5-195 IH28 01 VERTICAL TAIL	60.000	.000	1.000
(KEV22)	AMES 3.5-195 IH28 01 VERTICAL TAIL	90.000	.000	1.000
(KEV23)	AMES 3.5-195 IH28 01 VERTICAL TAIL	120.000	.000	1.000

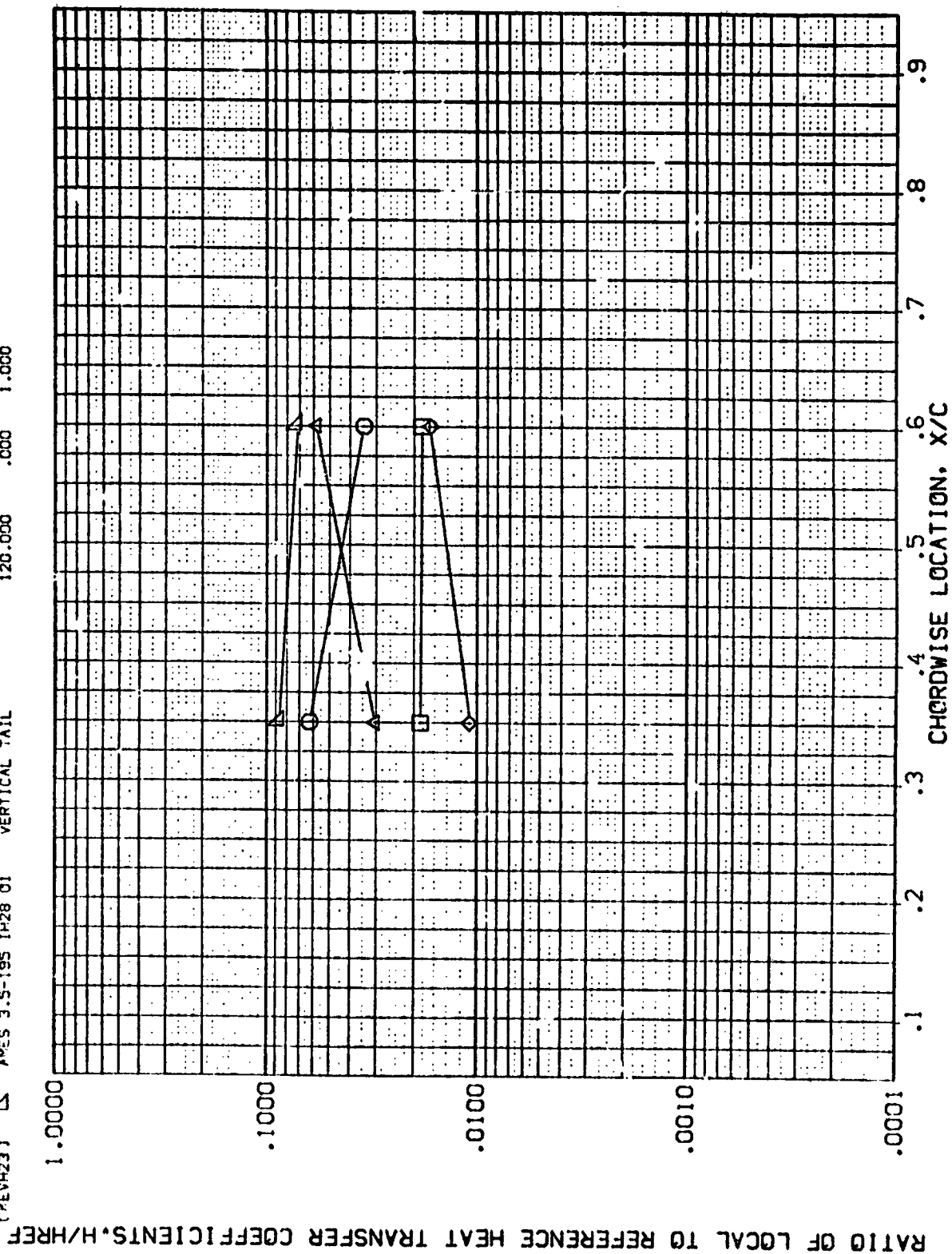


FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 Z = 736.570

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	PETA	RM/L
(KEVH19)	AMES 3.5-195 IH28 01	.000	.000	1.000
(KEVH27)	AMES 3.5-195 IH28 01	-30.000	.000	1.000
(KEVH26)	AMES 3.5-195 IH28 01	-60.000	.000	1.000
(KEVH25)	AMES 3.5-195 IH28 01	-90.000	.000	1.000
(KEVH24)	AMES 3.5-195 IH28 01	-120.000	.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

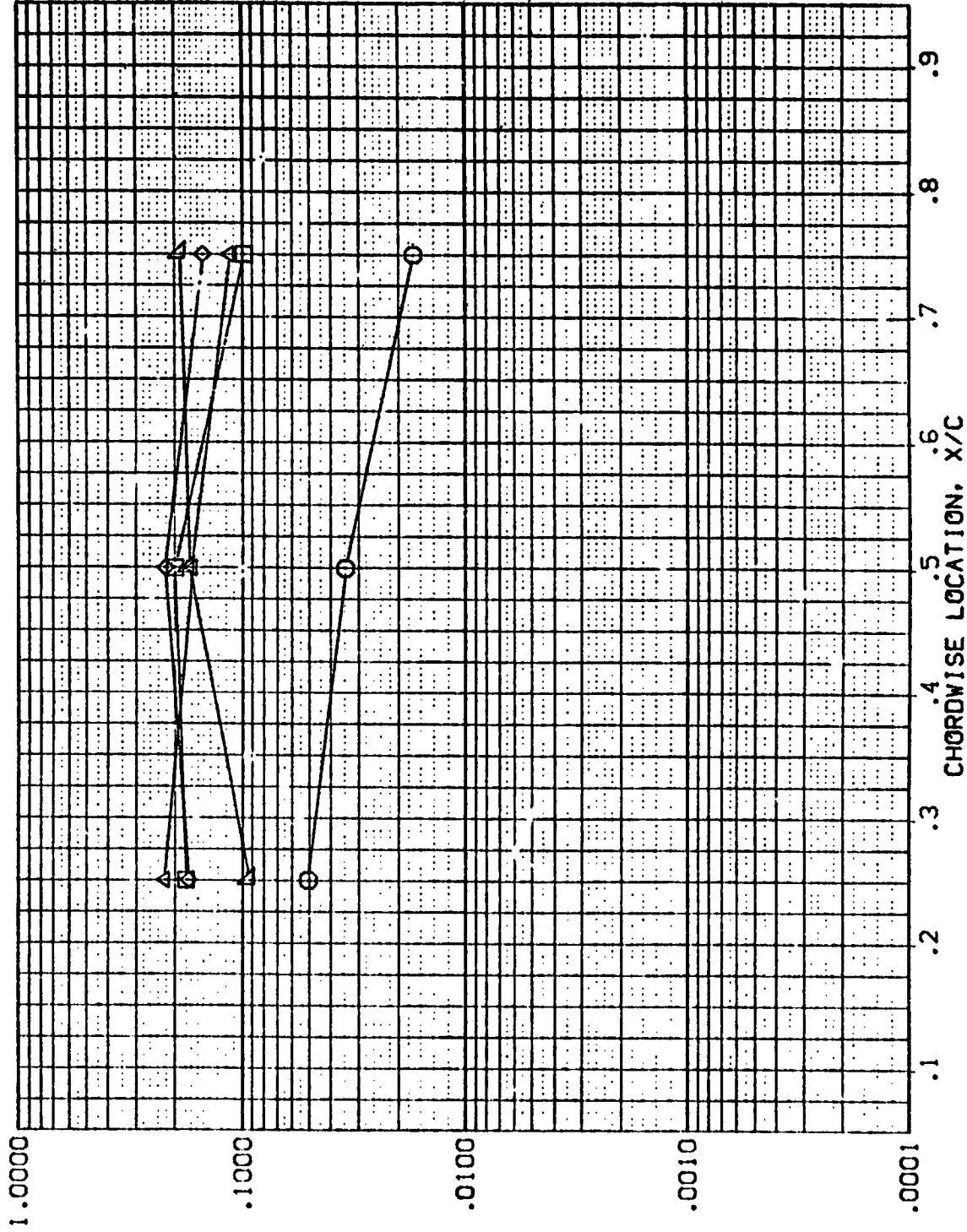
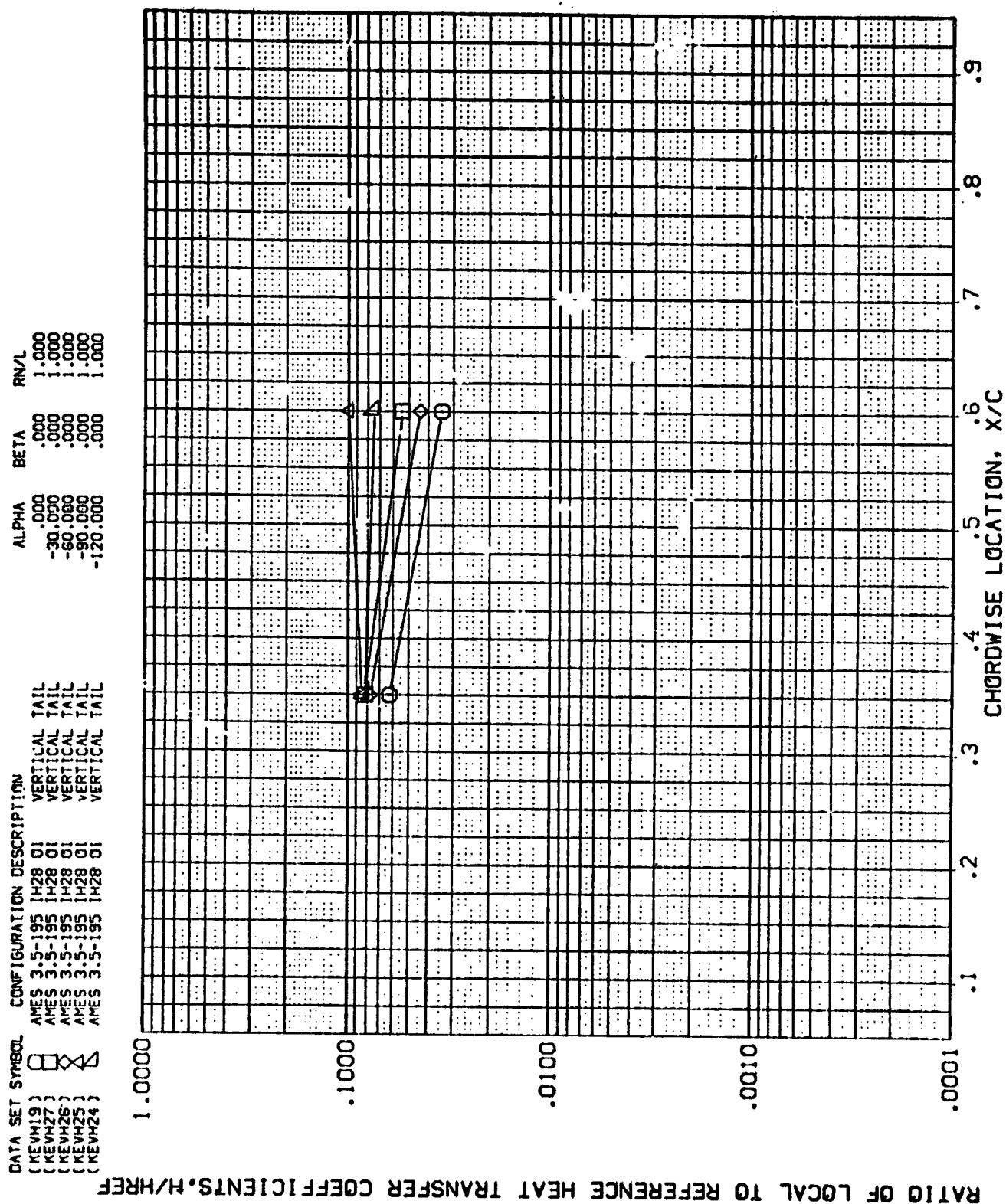


FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 Z = 596.000



RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAW/HT = .900 Z = 736.670

AMES 3.5-195 IH28 01-T1 VERTICAL TAIL

(KEVH01)

SYMBOL
 ◇
 □
 ○

HAY/HT Z MACH
 .850 596.000 5.228
 .900
 1.000

PARAMETRIC VALUES
 ALPHA .000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

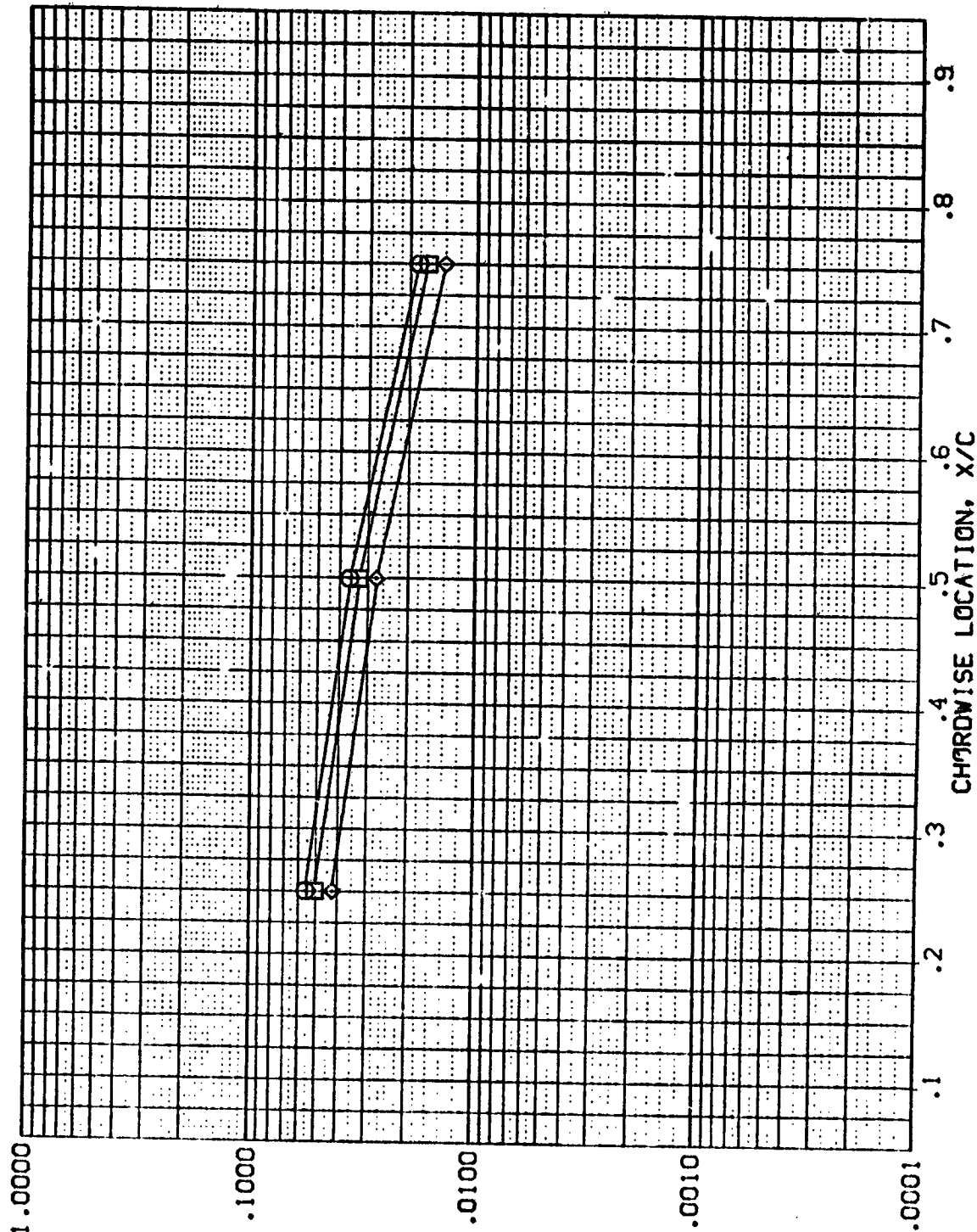


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH01)

PARAMETRIC VALUES
ALPHA
RN/L
BETA
1.000
.000

SYMBOL
HAW/HT
Z
MACH
736.670
5.228
1.000
1.000

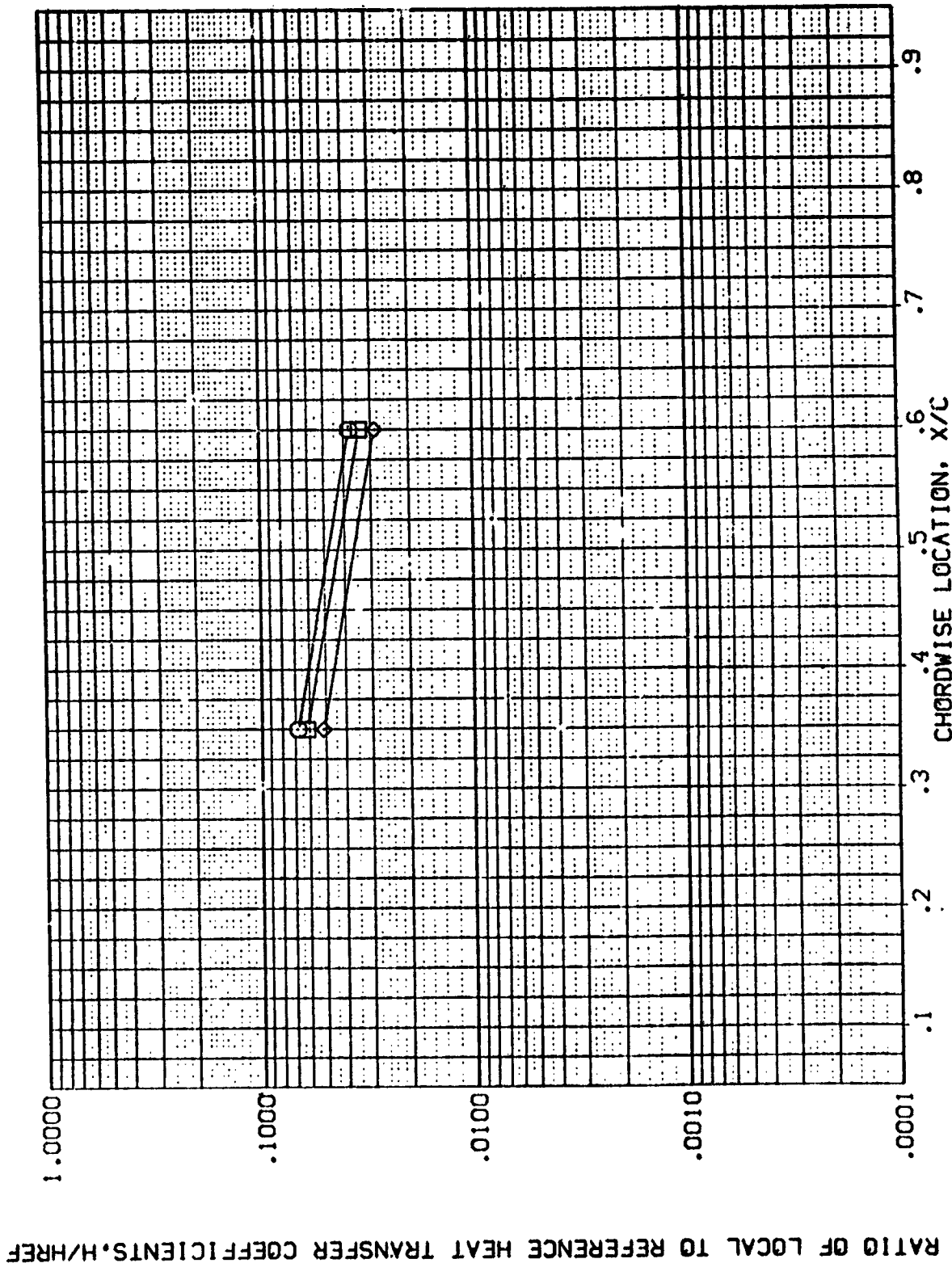


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH02)

SYMBOL

HAV/HT

Z

MACH

.850

596.000

5.219

.900

1.000

1.000

PARAMETRIC VALUES

38.000 BETA

.000

ALPHA

RV/L

1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

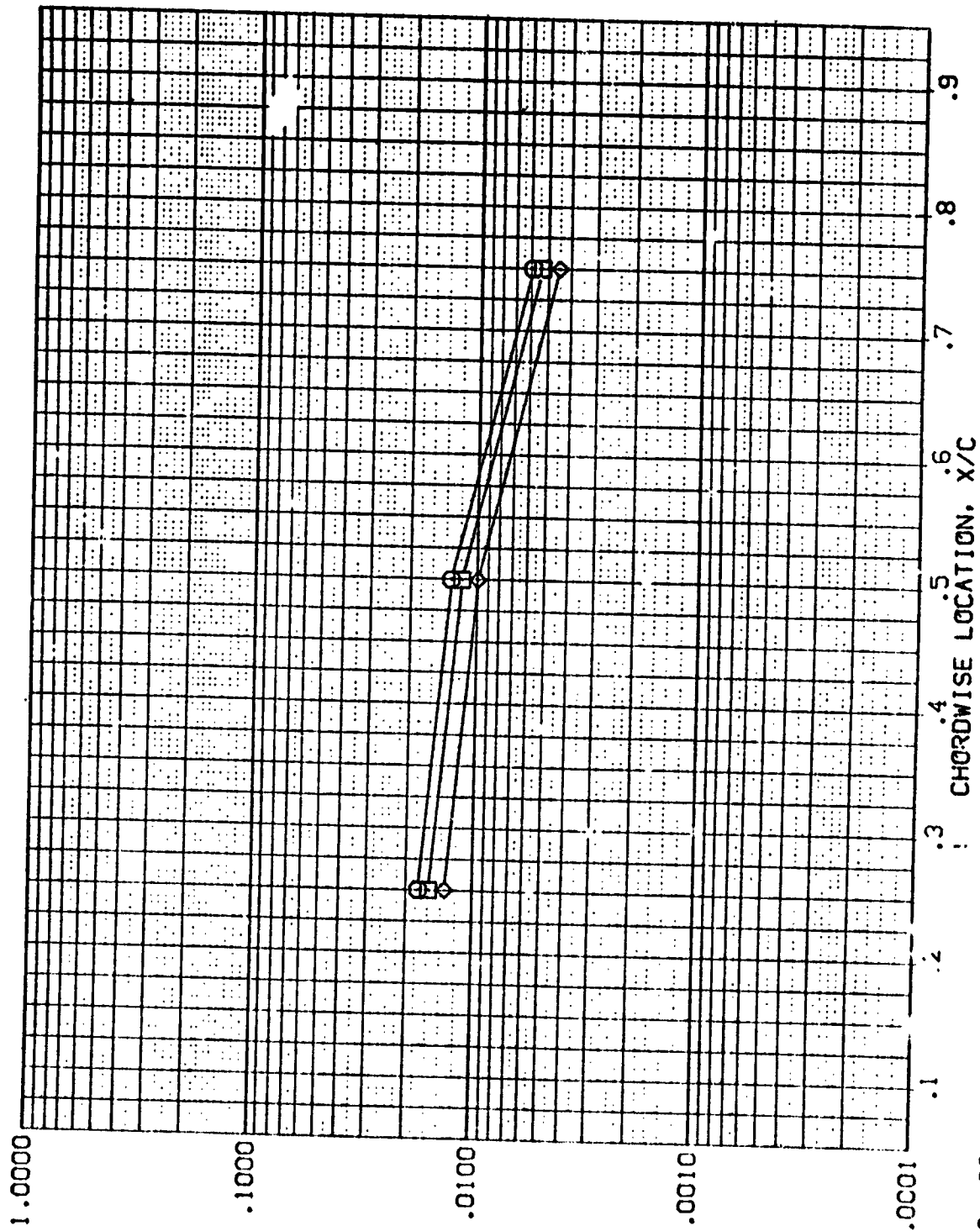


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH02)

SYMBOL	HAW/HT	Z	MACH	ALPHA RN/L	PARAMETRIC VALUES 30.000 BETA 1.000	.000
◇	.850	736.670	5.219			
□	.900					
◇	1.000					

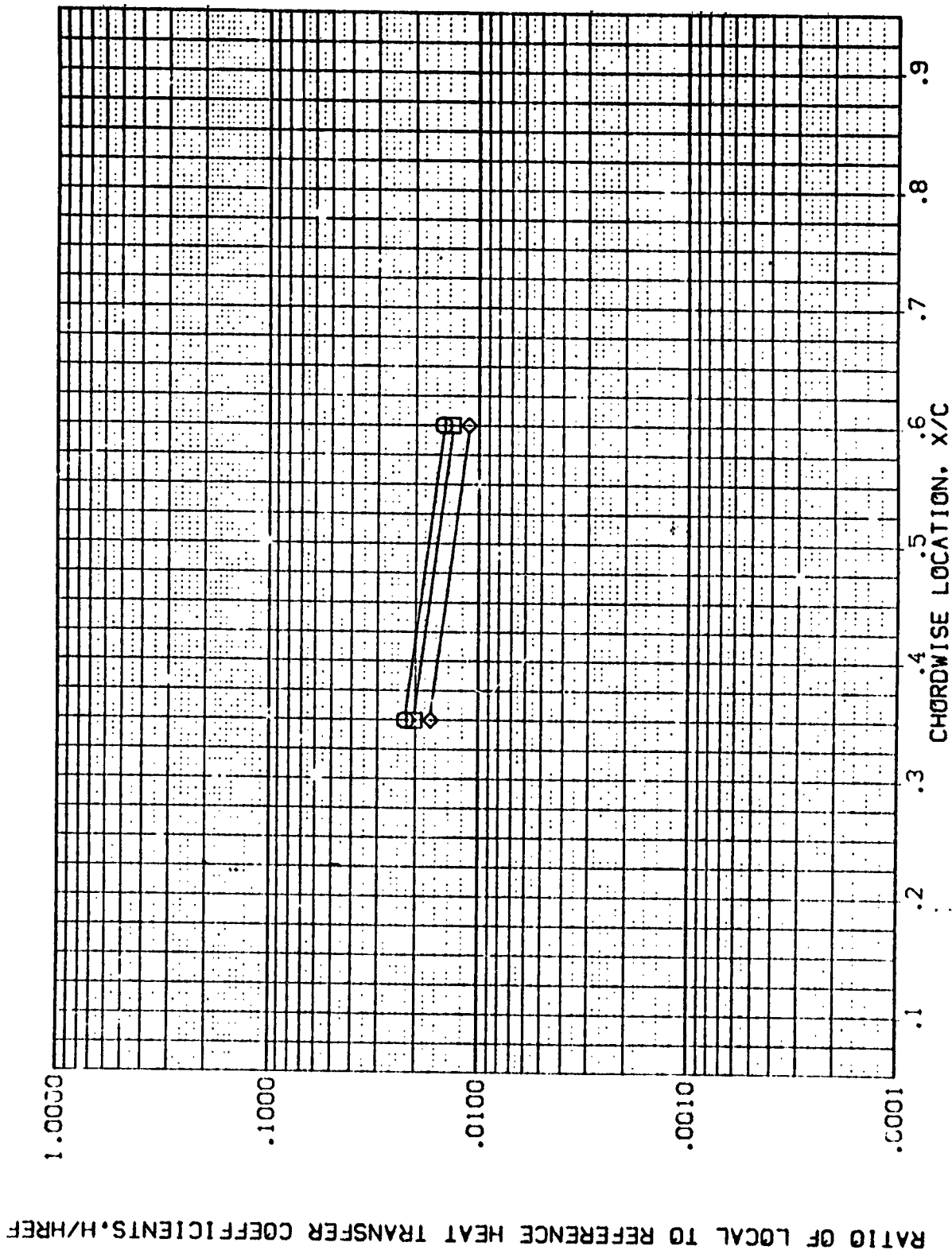


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL.

(KEVH03)

SYMBOL	HAY/HT	Z	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA
○	.850	596.000	5.220	60.000	.000
□	.900			1.000	
◇	1.000				

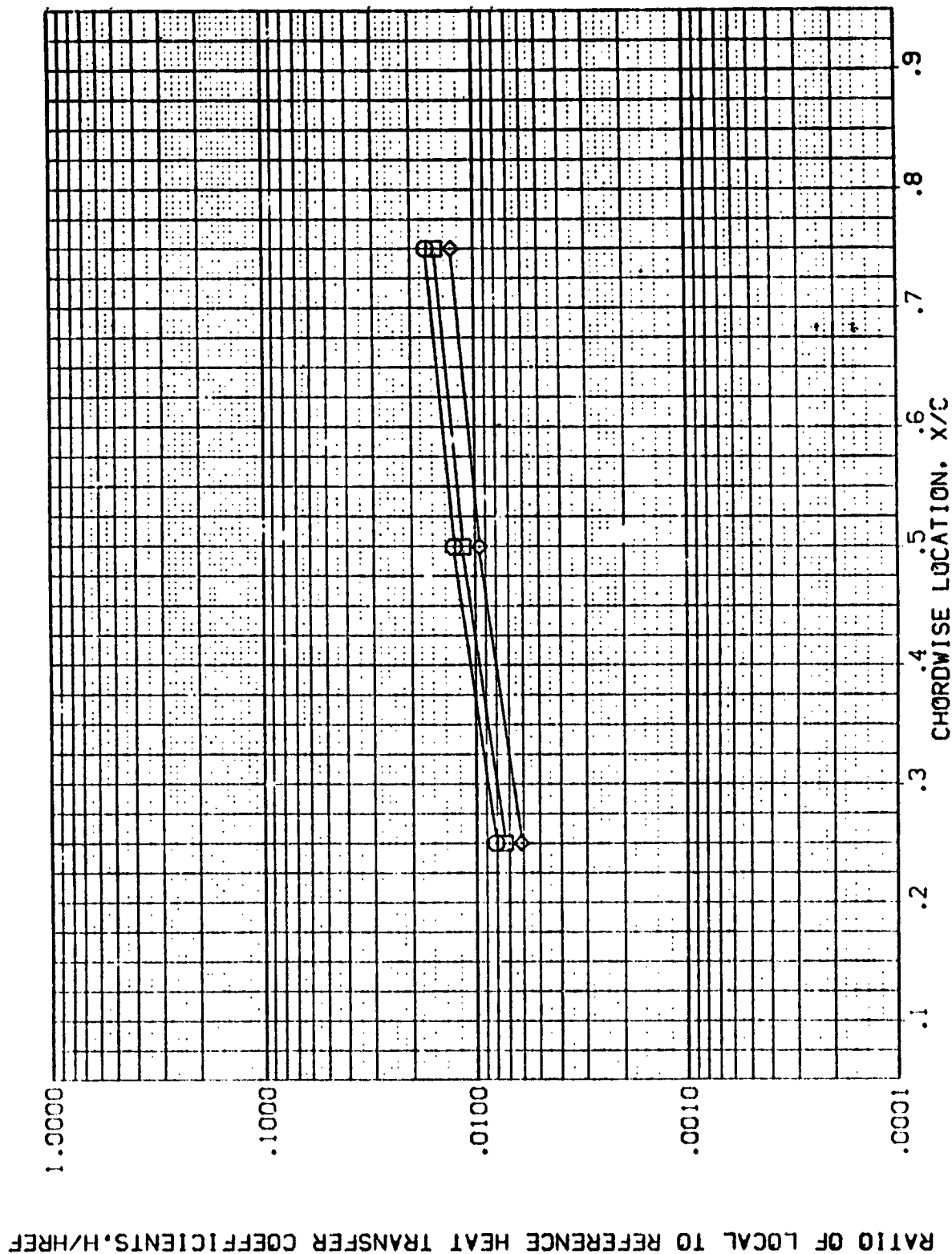


FIG. 26 VERTICAL TAIL, GUBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH03)

SYMBOL	HAW/HT	Z	MACH	PARAMETRIC VALUES	
				ALPHA RN/L	BETA RN/L
□	.850	736.670	5.220	60.000	.000
◇	.900			1.000	
◇	1.000				

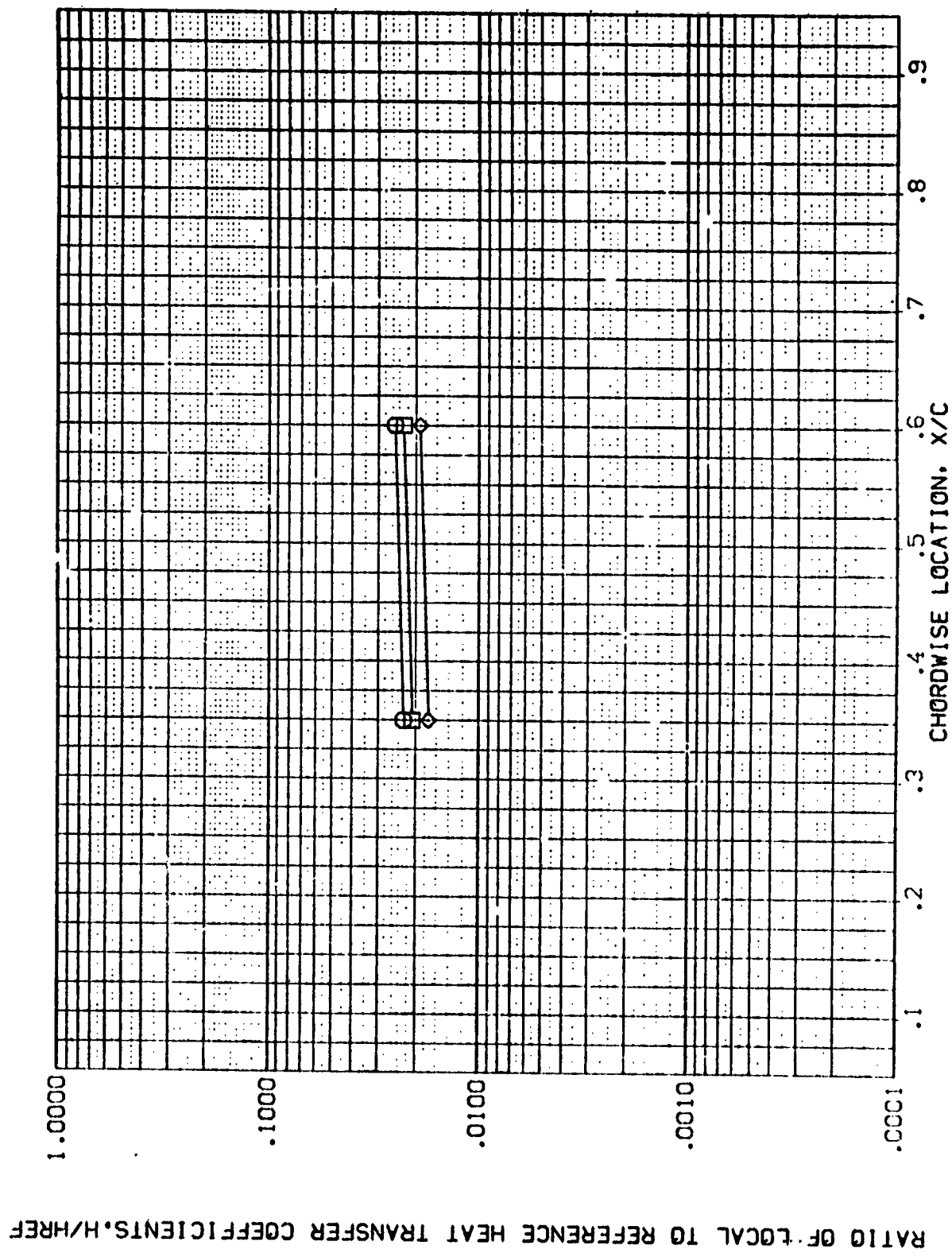


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH04)

SYMBOL
 ◊
 □
 ○

HAW/HT
 .850
 .900
 1.000

Z
 596.000

MACH
 5.219

PARAMETRIC VALUES
 ALPHA
 RN/L
 90.000
 1.000
 BETA
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

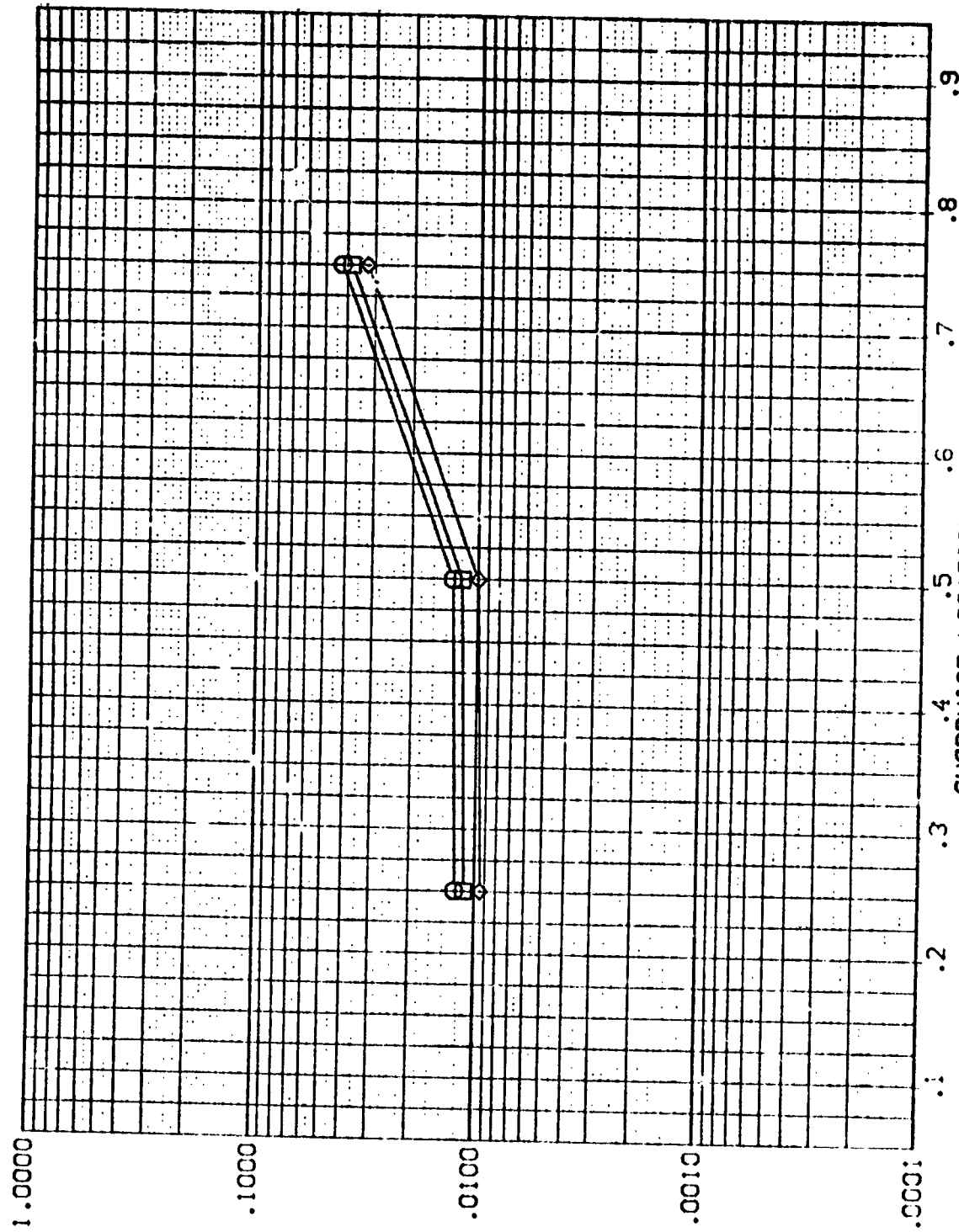


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

(KEVH04)

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

PARAMETRIC VALUES
ALF-A 90.000 BETA .000
RN/L 1.000

SYMBOL HAW/HT Z MACH
◇ .850 736.670 5.219
□ .900
◇ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

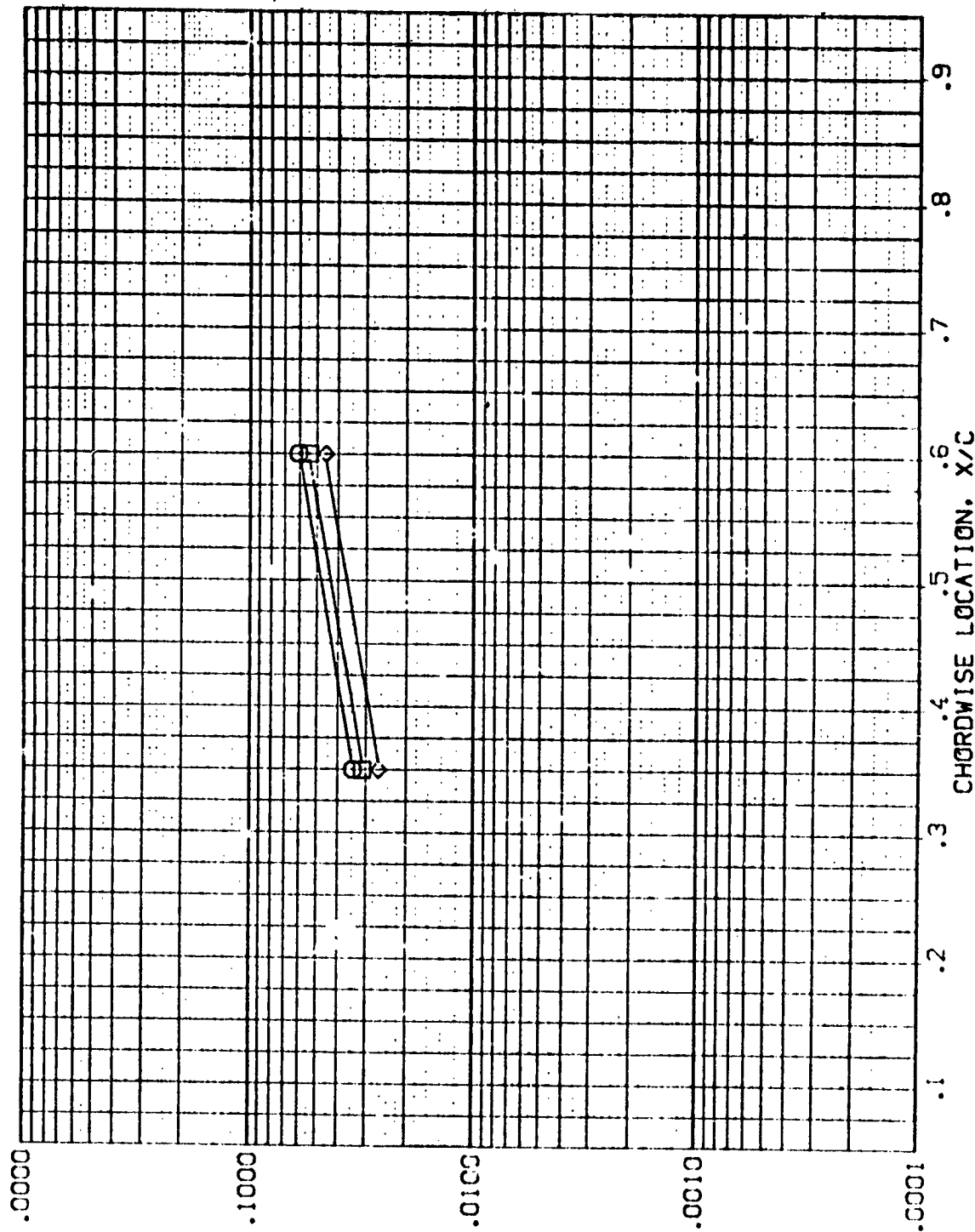


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH05)

SYMBOL	HAB/H	Z	MACH	PARAMETRIC VALUES
◇	.850	596.000	5.220	ALPHA 120.000 BETA .000
◇	.900			RM/L 1.000
◇	1.000			

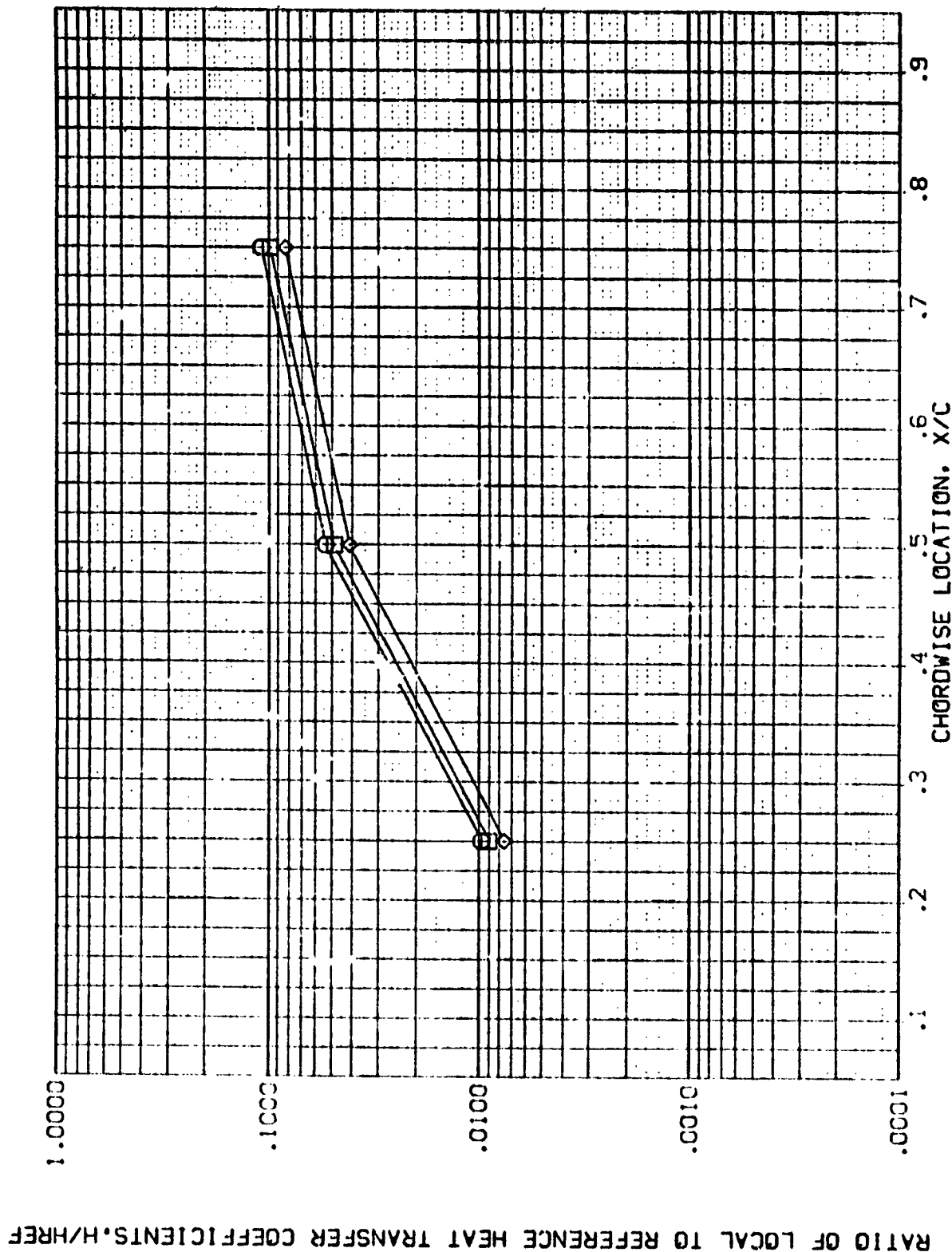


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 Q1+T1 VERTICAL TAIL

PARAMETRIC VALUES	
120.000	BETA
1.000	

ALPHA
RN/L

HAW/WT	Z	MACH
.850	736.670	5.220

SYMB
O
Q
D

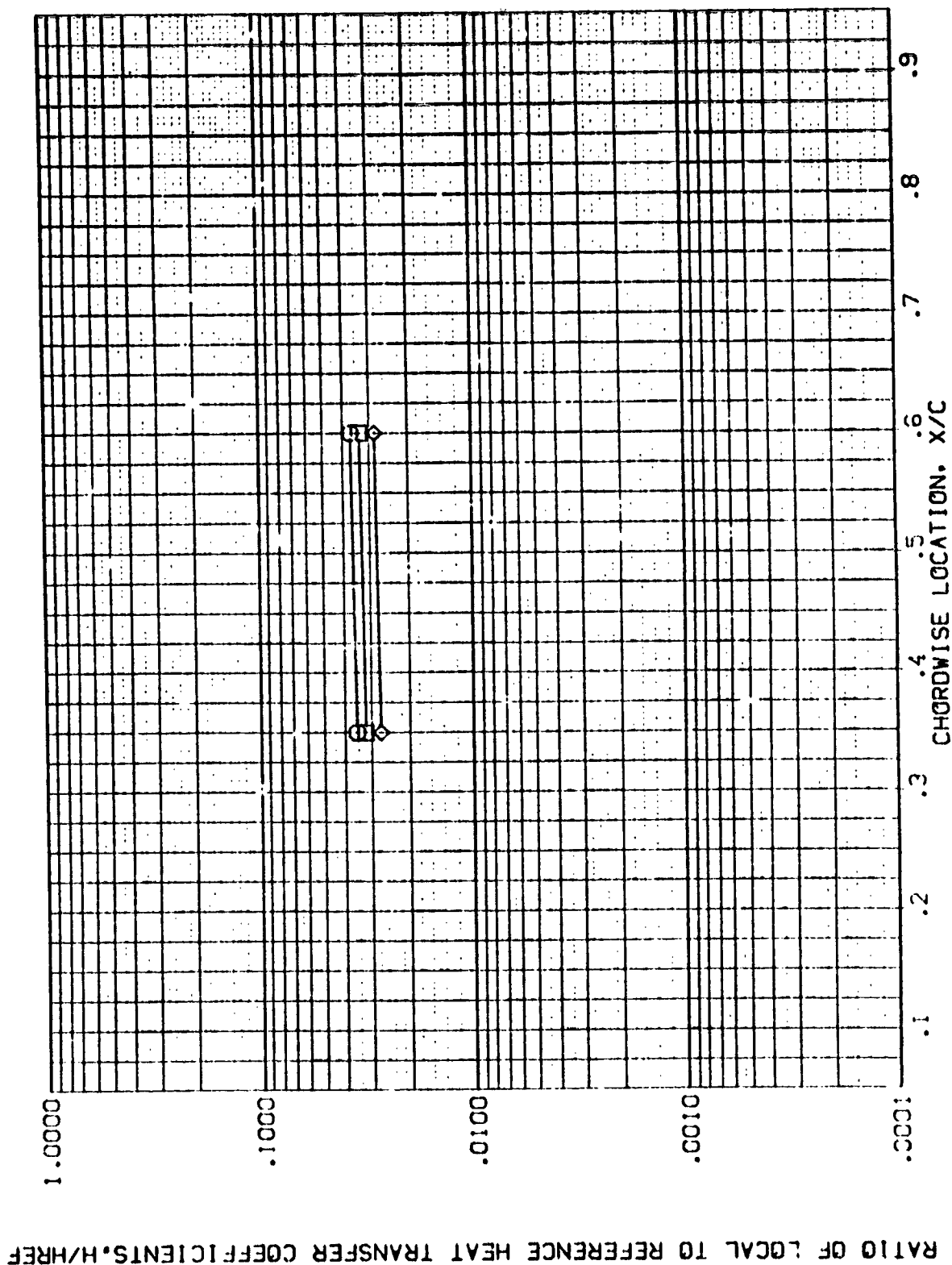


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 VERTICAL TAIL

(KEVH06)

SYMBOL H/W/HT Z MACH
 .850 595.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

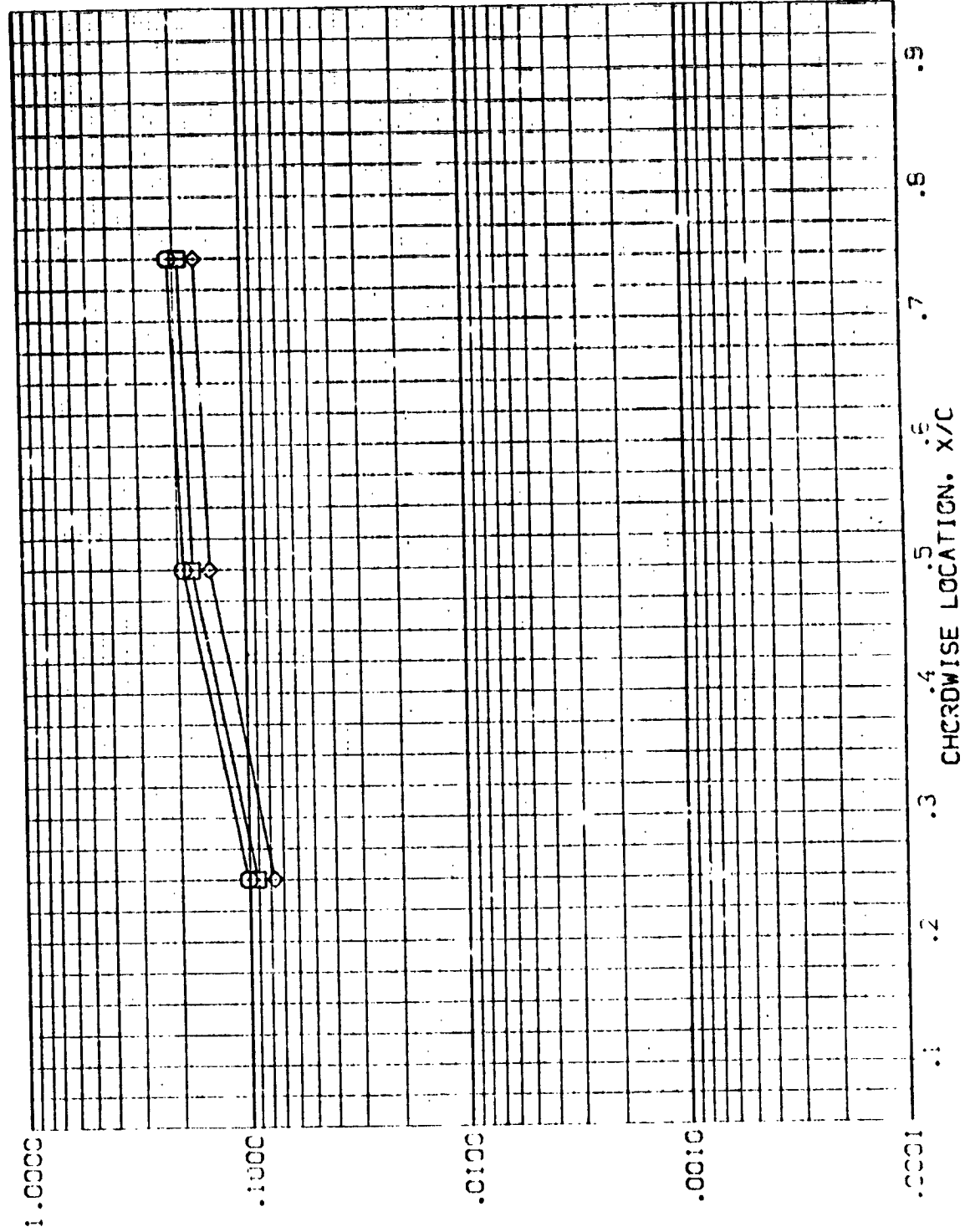


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH06)

SYMBOL
 ◊
 □
 ○

MAW/HT Z MACH
 .850 736.670 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -120.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

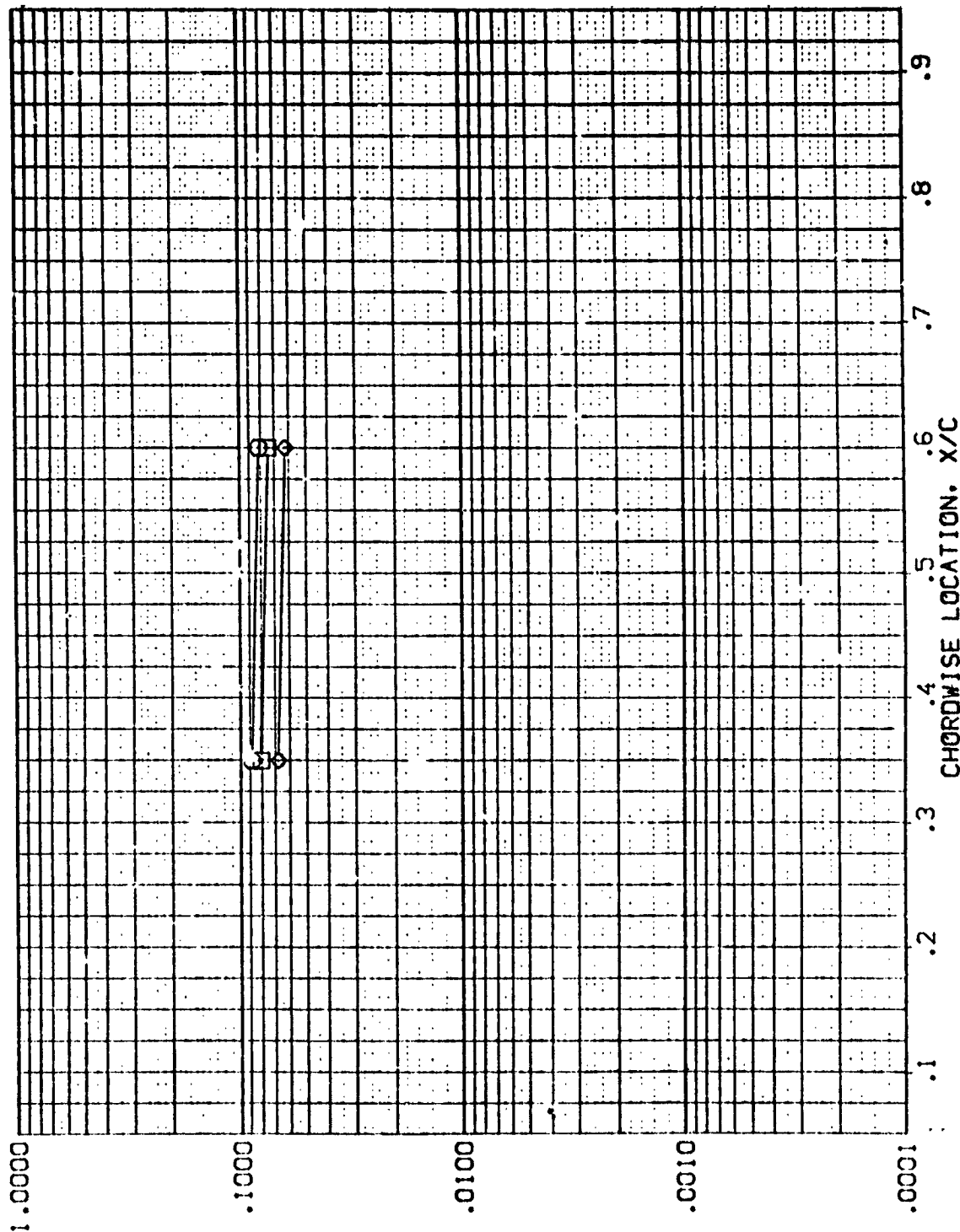


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL.

(KEVH07)

SYMBOL
 ◇
 □
 ○

MAN/HT Z MACH
 .850 596.000 5.219
 .900
 1.000

PARAMETRIC VALUES
 -90.000 BETA .000
 RN/L 1.000

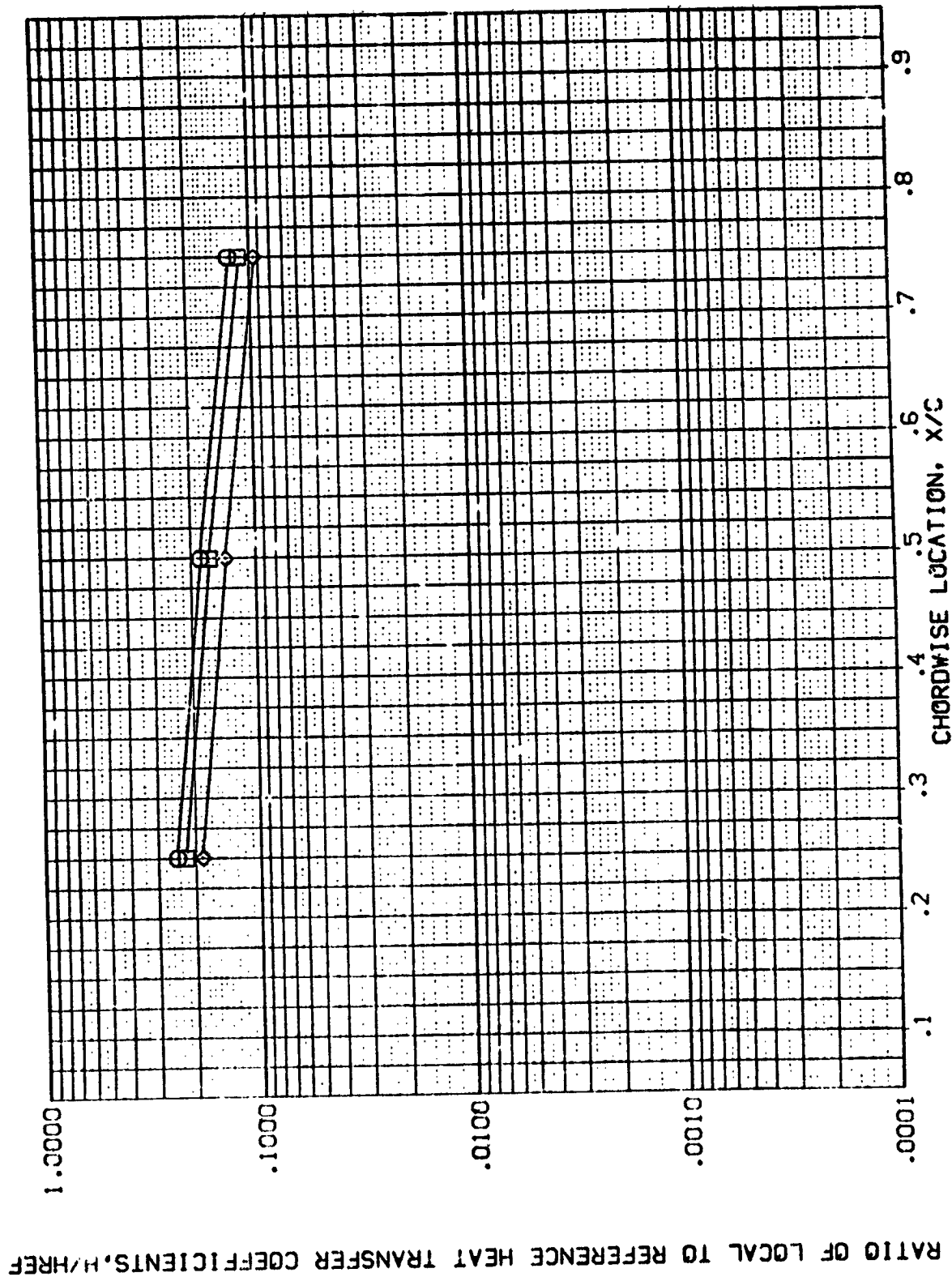


FIG. 28 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH07)

SYMBOL
 □
 ◇

HAW/HT .850
 Z 736.670
 MACH 5.219
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -90.000
 RN/L 1.000
 BETA .000

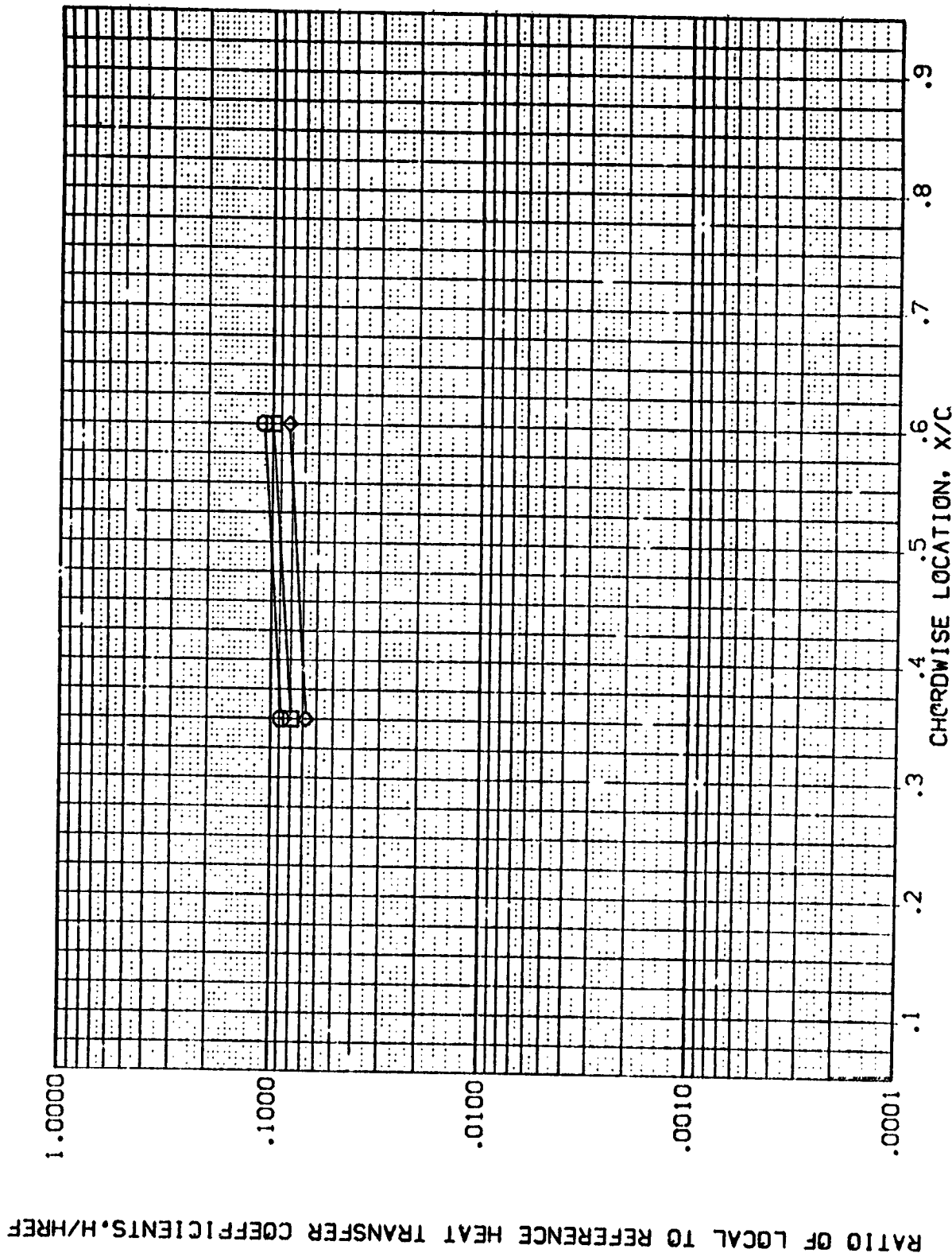


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH08)

SYMBOL
 ○
 □
 ◇

HAW/HT Z MACH
 .850 596.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -60.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

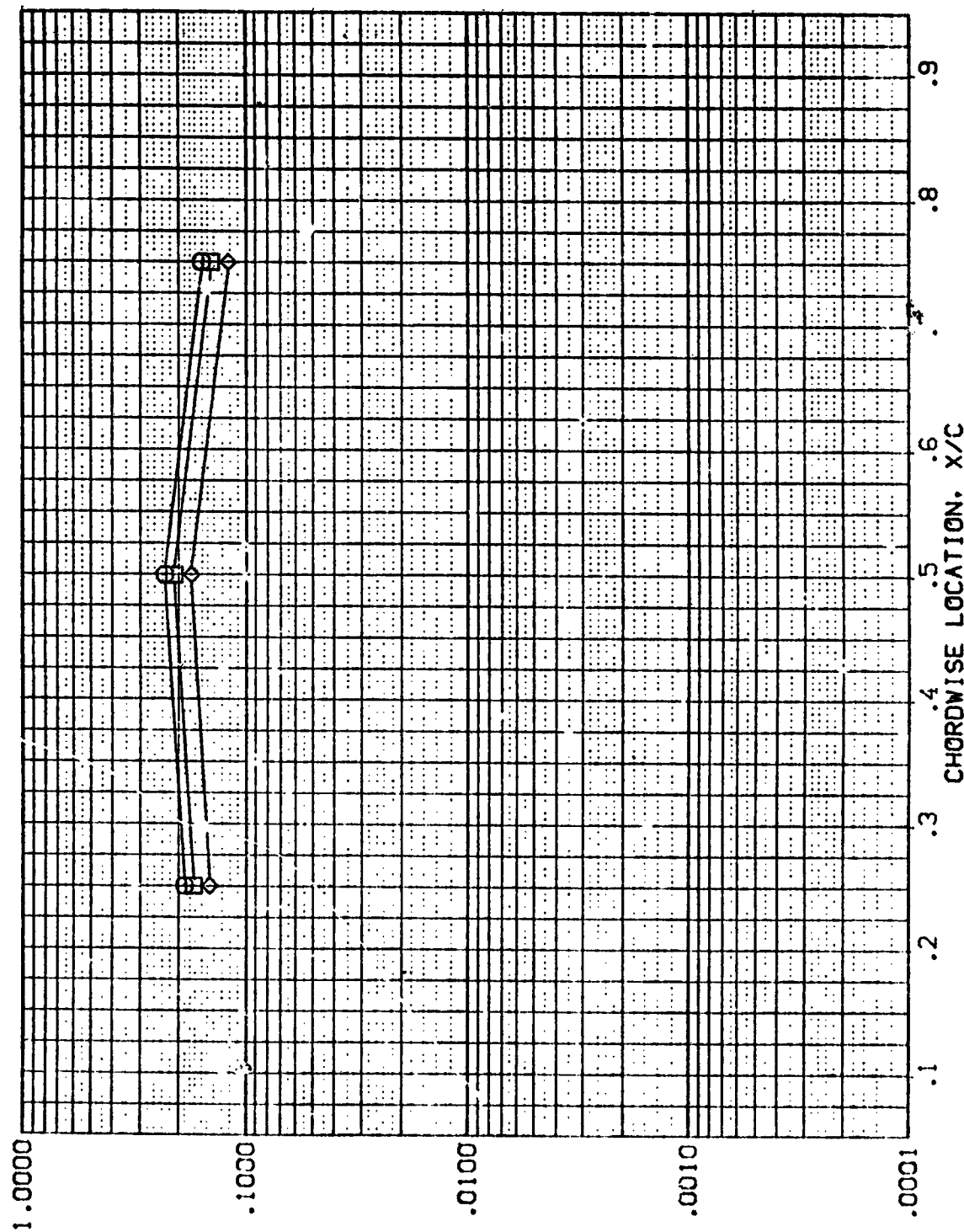


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH08)

SYMBOL
 □
 ◇

HAW/HT Z MACH
 .850 736.670 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA RN/L -60.000
 BETA 1.000
 .000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

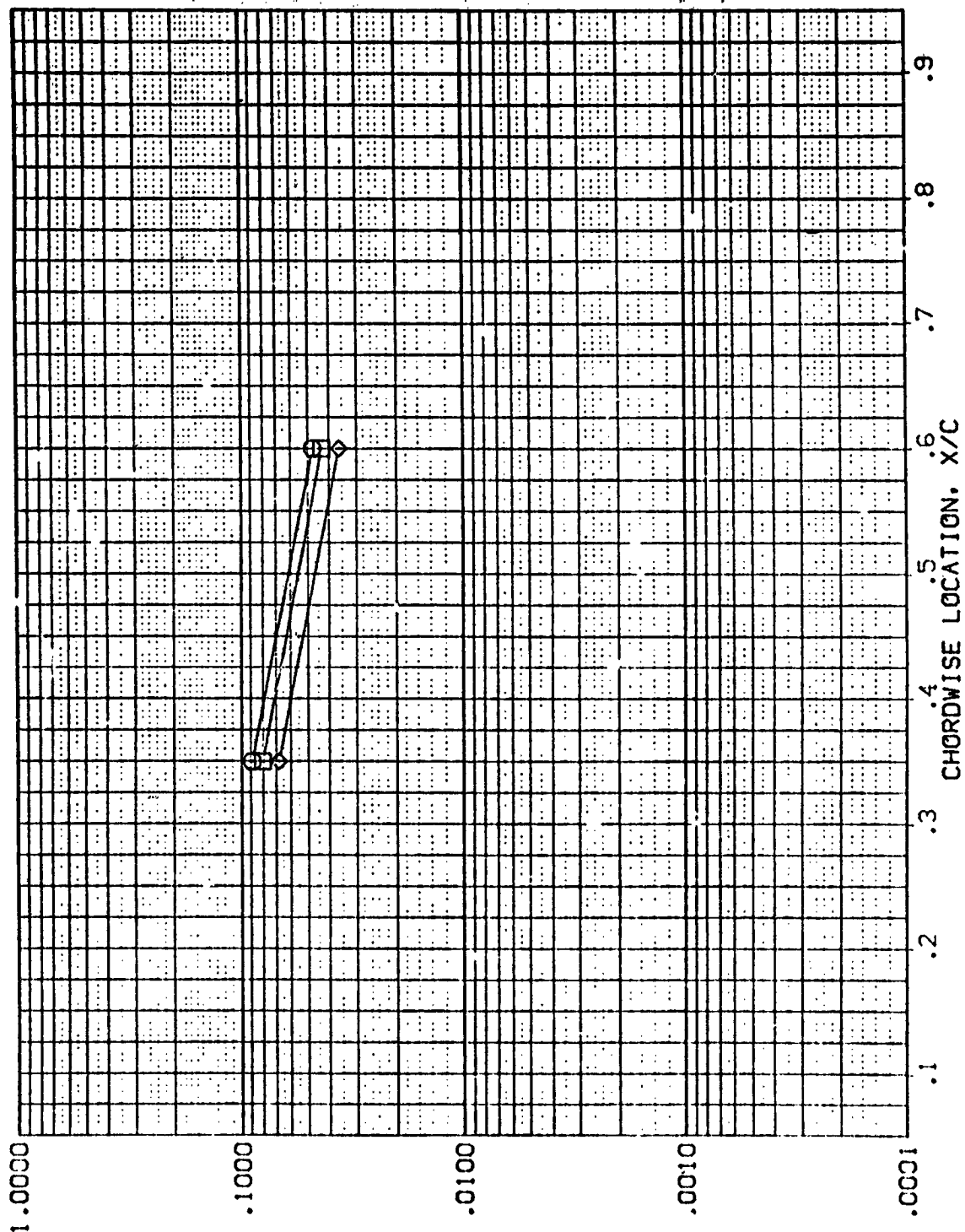


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH09)

SYMBOL
 ○
 □
 ◇

HAW/HT Z MACH
 .950 596.000 5.220
 .900
 1.000

PARAMETRIC VALUES
 ALPHA -30.000 BETA .000
 RN/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

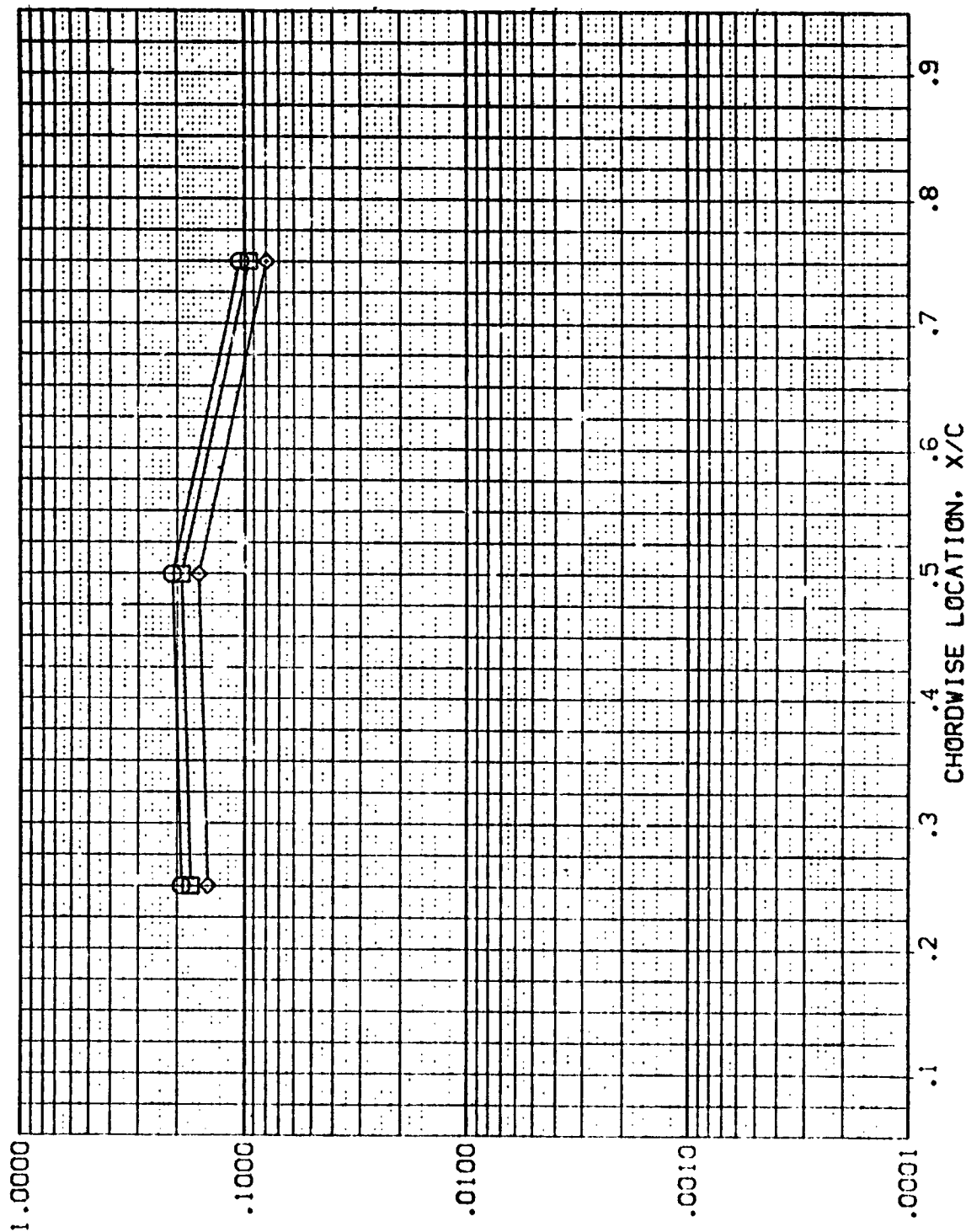


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH09)

SYMBOL
 \square
 \diamond

HAW/HT Z MACH
 .850 736.670 5.220
 .900
 1.000

PARAMETRIC VALUES
 -30.000 BETA .000
 RV/L 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

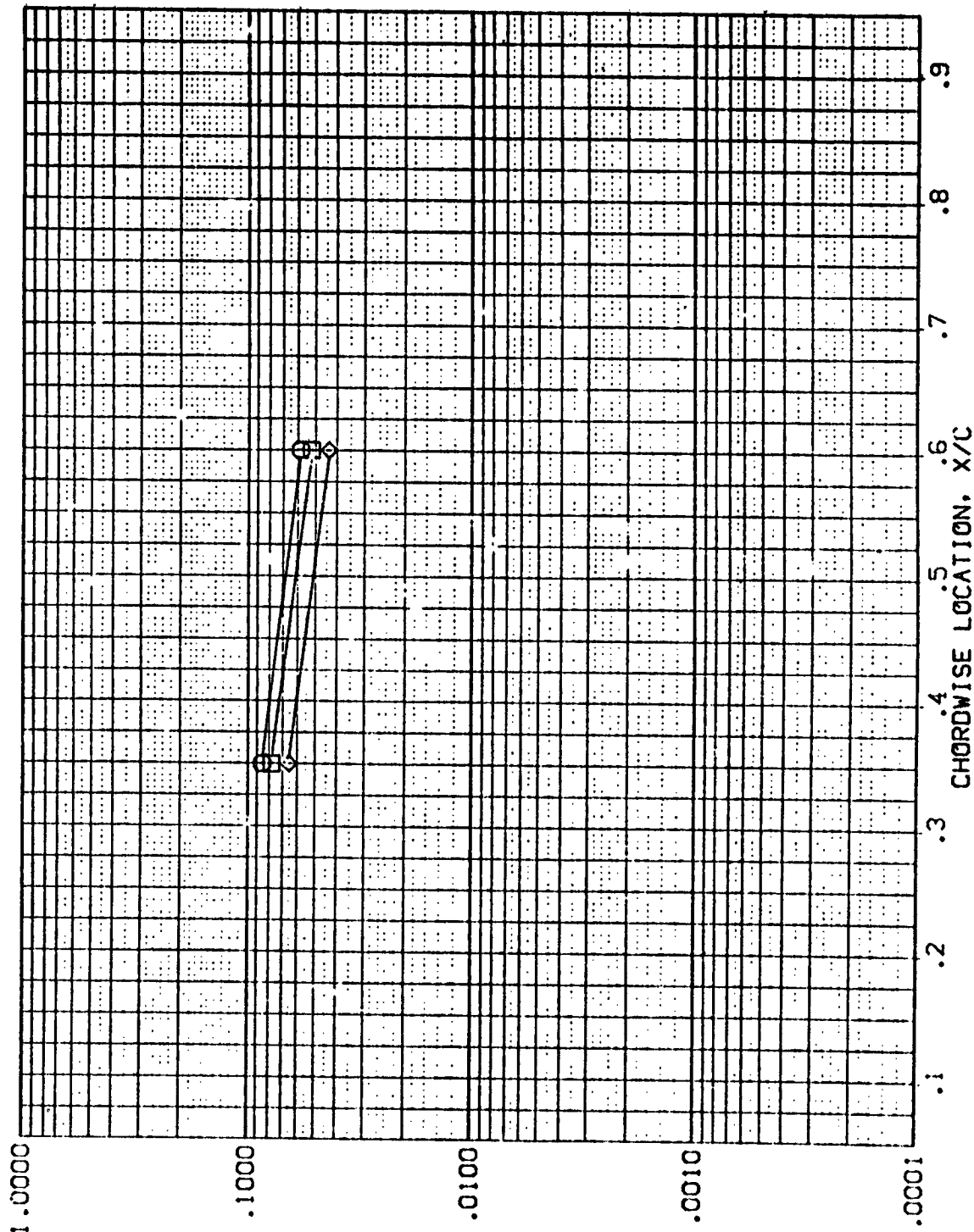


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

PARAMETRIC VALUES
ALPHA 60.000
RN/L 4.000
BETA .000

SYMBOL HAW/HT Z MACH
◇ .850 596.000 5.299
□ .900
○ 1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

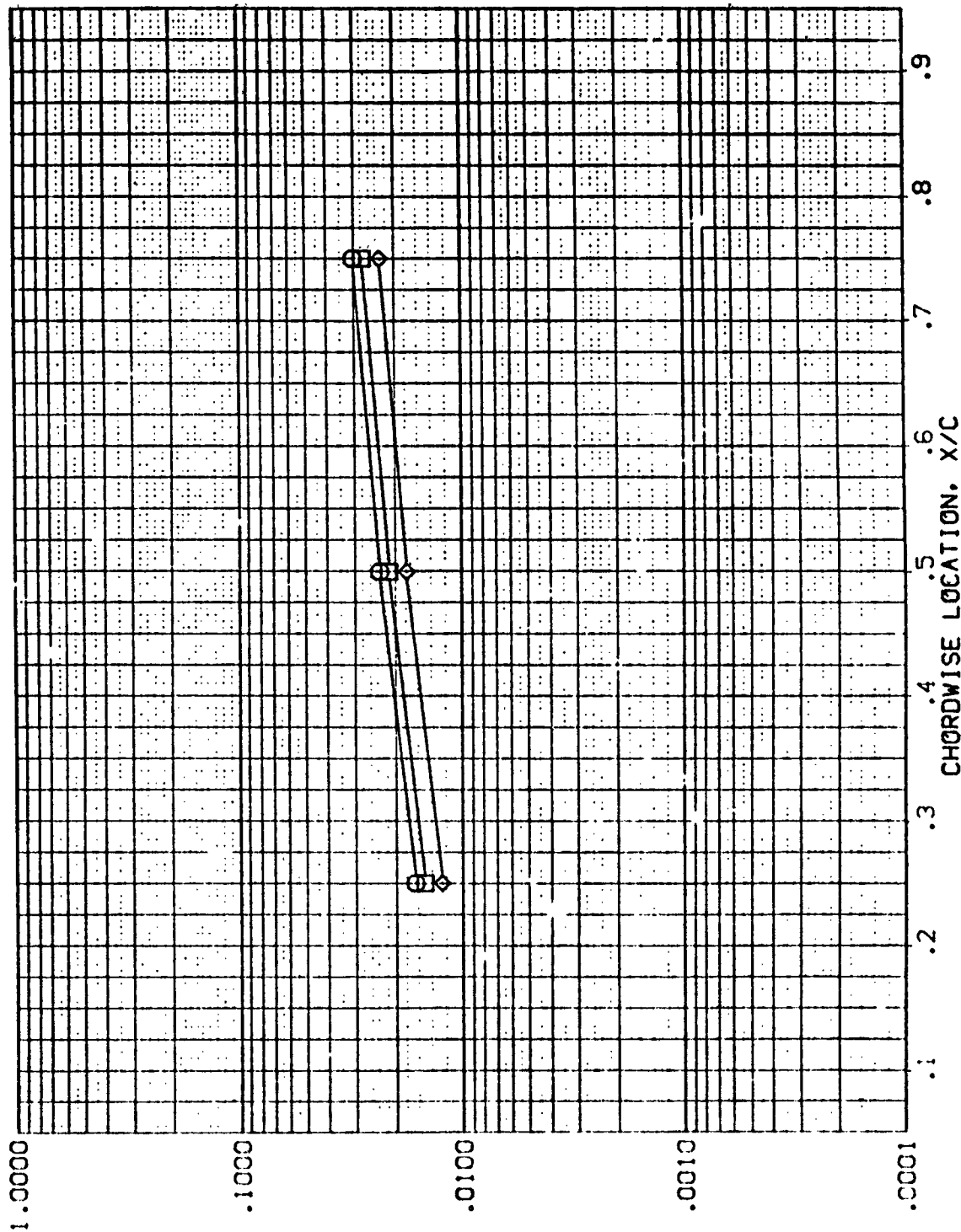


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AVES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH10)

SYMBOL
□
◇

HAW/HT
.850
.900
1.000

Z

736.670

MACH

5.299

PARAMETRIC VALUES

ALPHA
RN/L

60.000
4.000

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

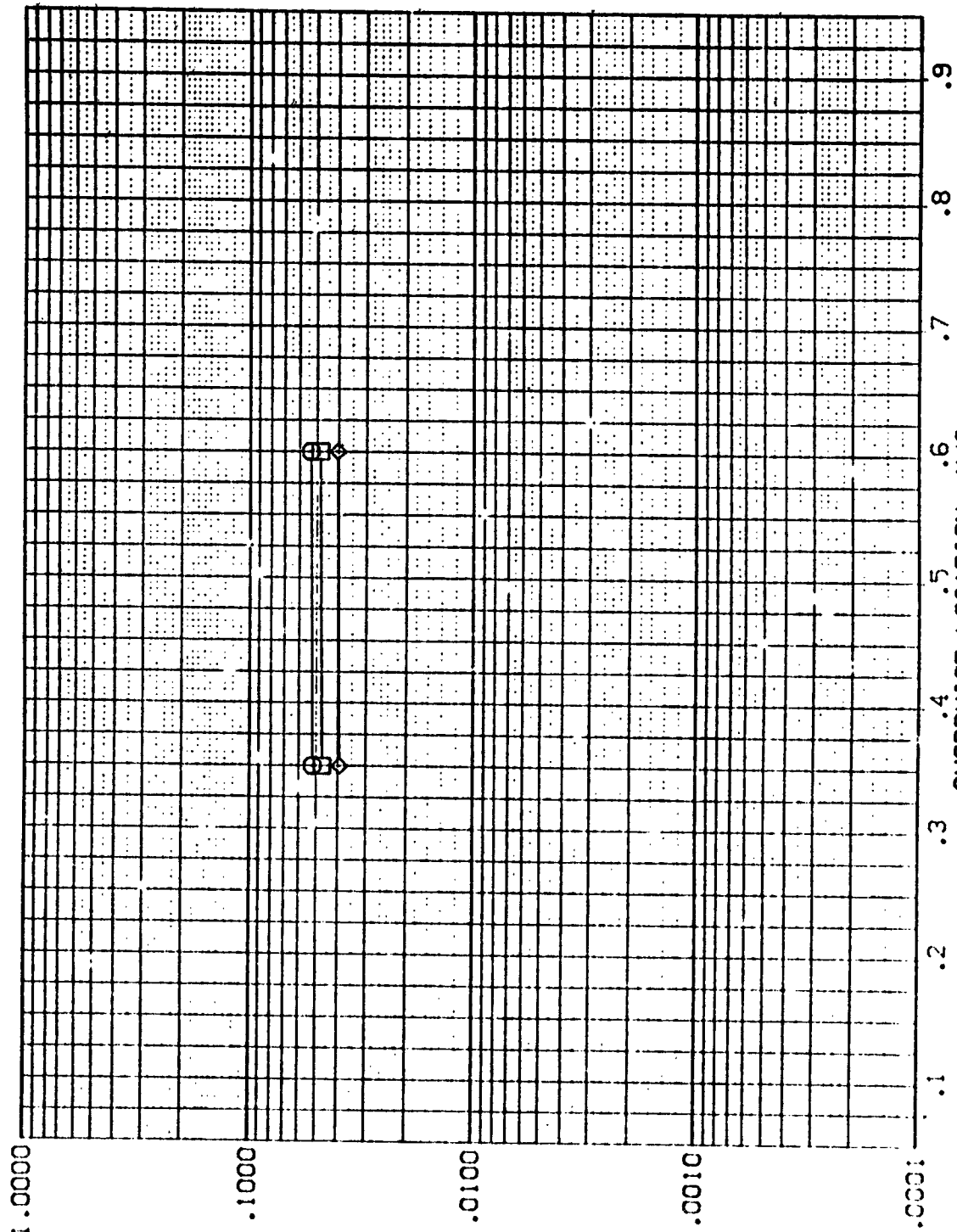


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH11)

SYMBOL

HA/HT
.85C
.92C
1.00C

Z

596.000

MACH

5.300

PARAMETRIC VALUES

ALPHA
RN/L

30.730
4.000

BETA

.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, h/h_{REF}

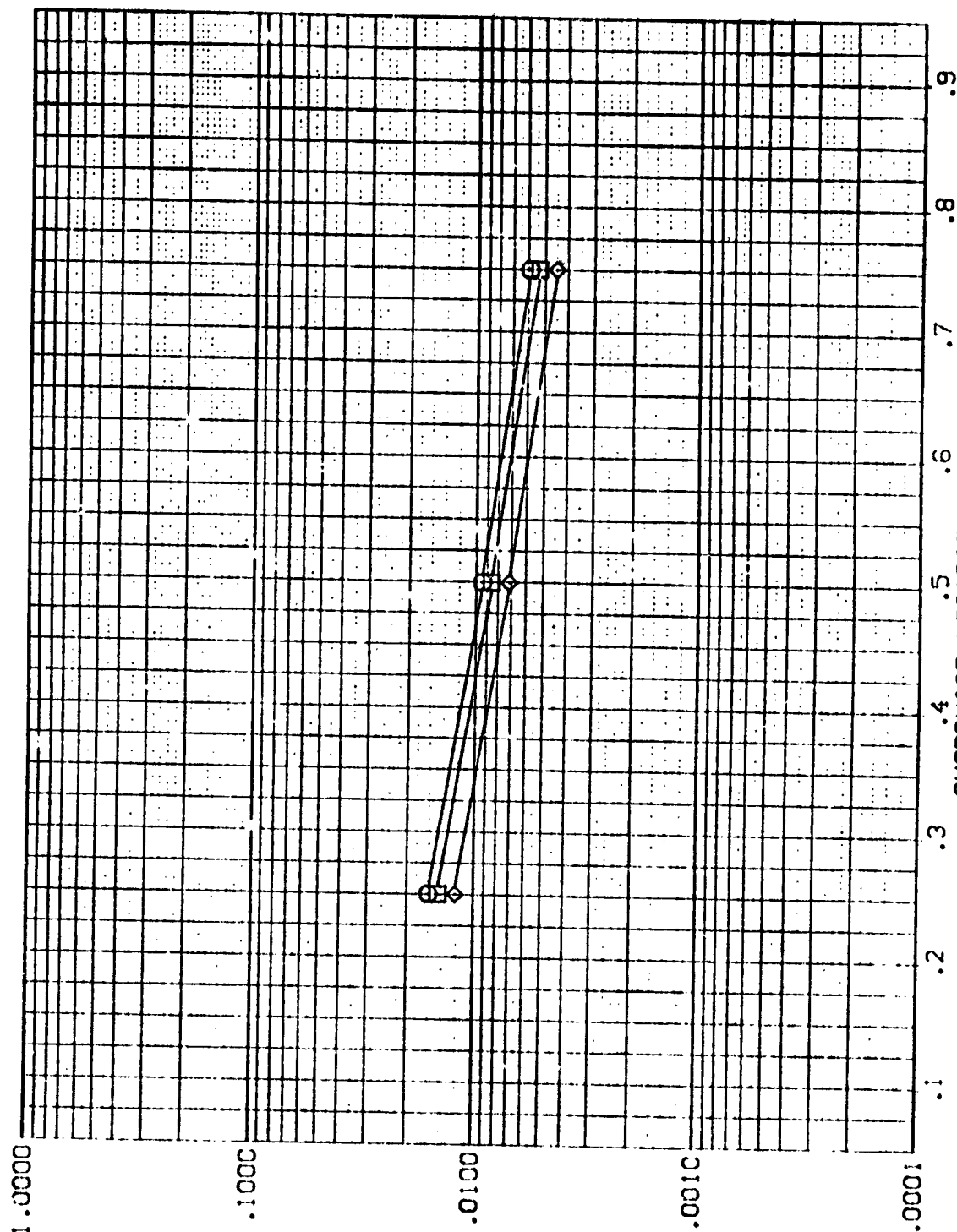


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 C1+T1 VERTICAL TAIL (KEVH11)

SYMBOL: \diamond \square \circ
 HAW/HT: .850
 Z: 736.670
 MACH: 5.300
 .900
 1.000

PARAMETRIC VALUES
 ALPHA: 30.000
 RN/L: 4.000
 BETA: .0000

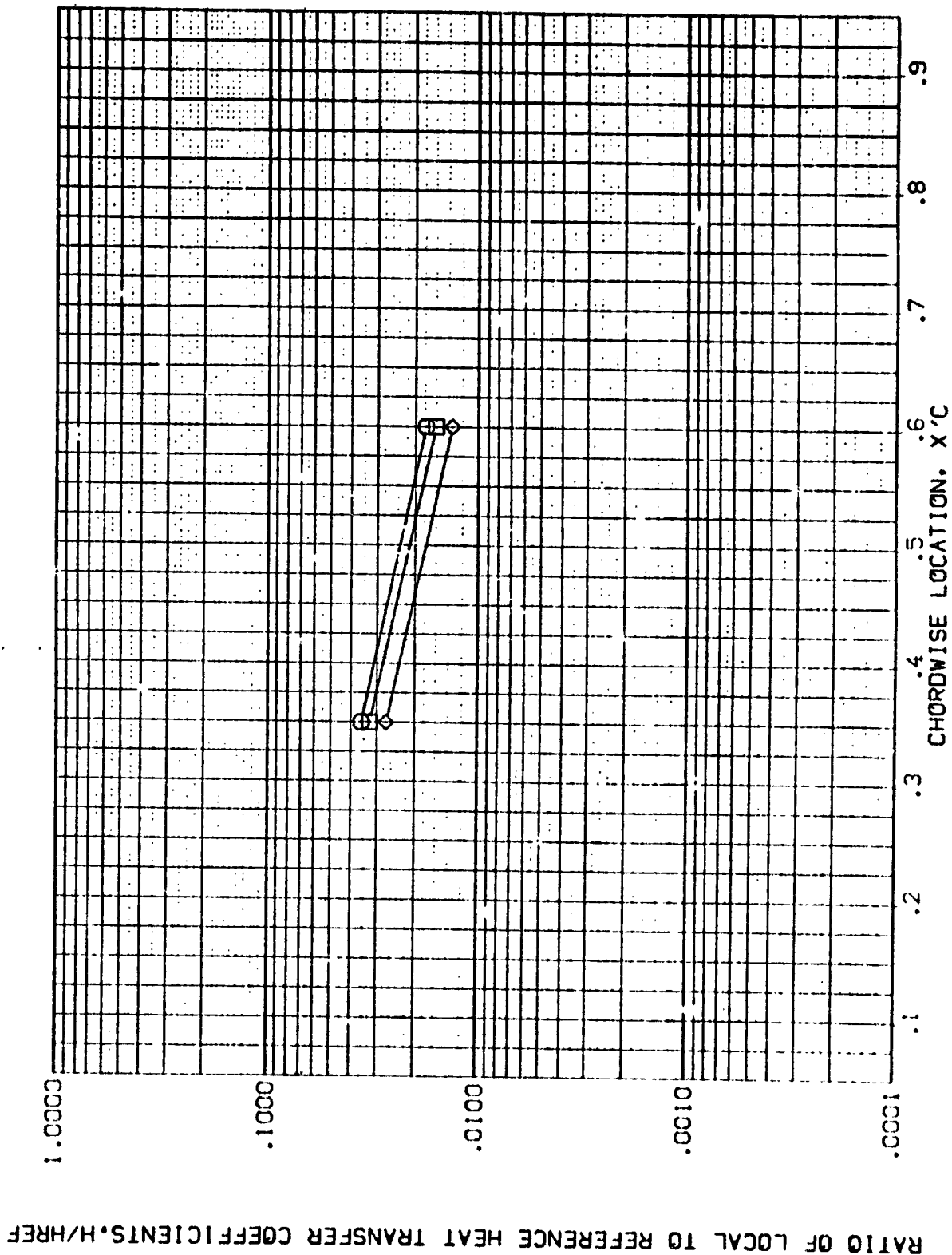


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

(KEVH12)

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

SYMBOL MACH Z
 .850 596.000
 .900
 1.023

PARAMETRIC VALUES
 30.0° ALPHA
 1.000 RN/L
 -5.000 BETA

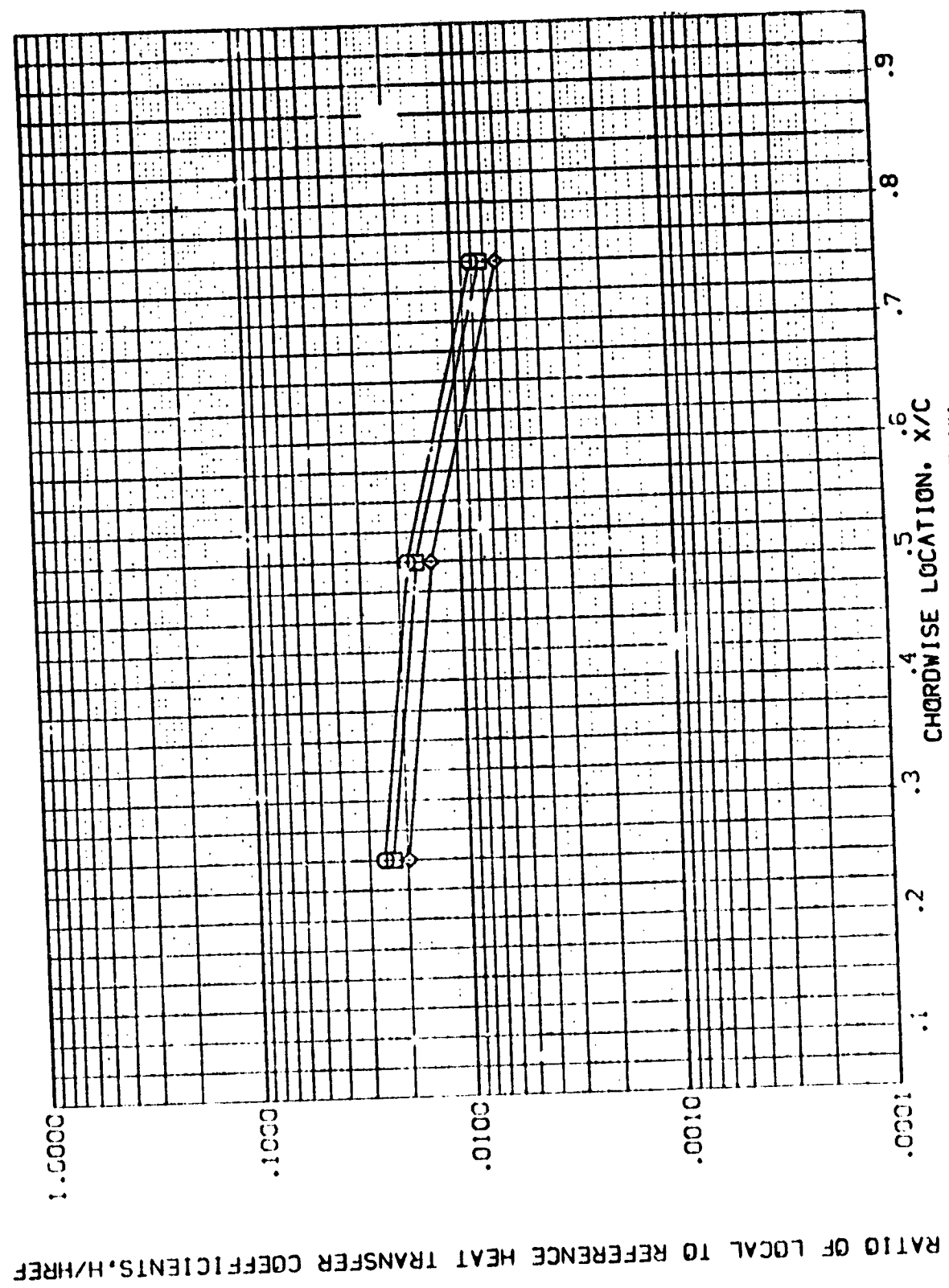


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

REPRODUCIBILITY OF
 ORIGINAL PAGE IS 1

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(KEVH12)

SYMBOL	HAW/HT	Z	MACH	PARAMETRIC VALUES	
				ALPHA	BETA
□	.850	736.670	5.220	RN/L	30.000
◇	.900				1.000
	1.000				-5.000

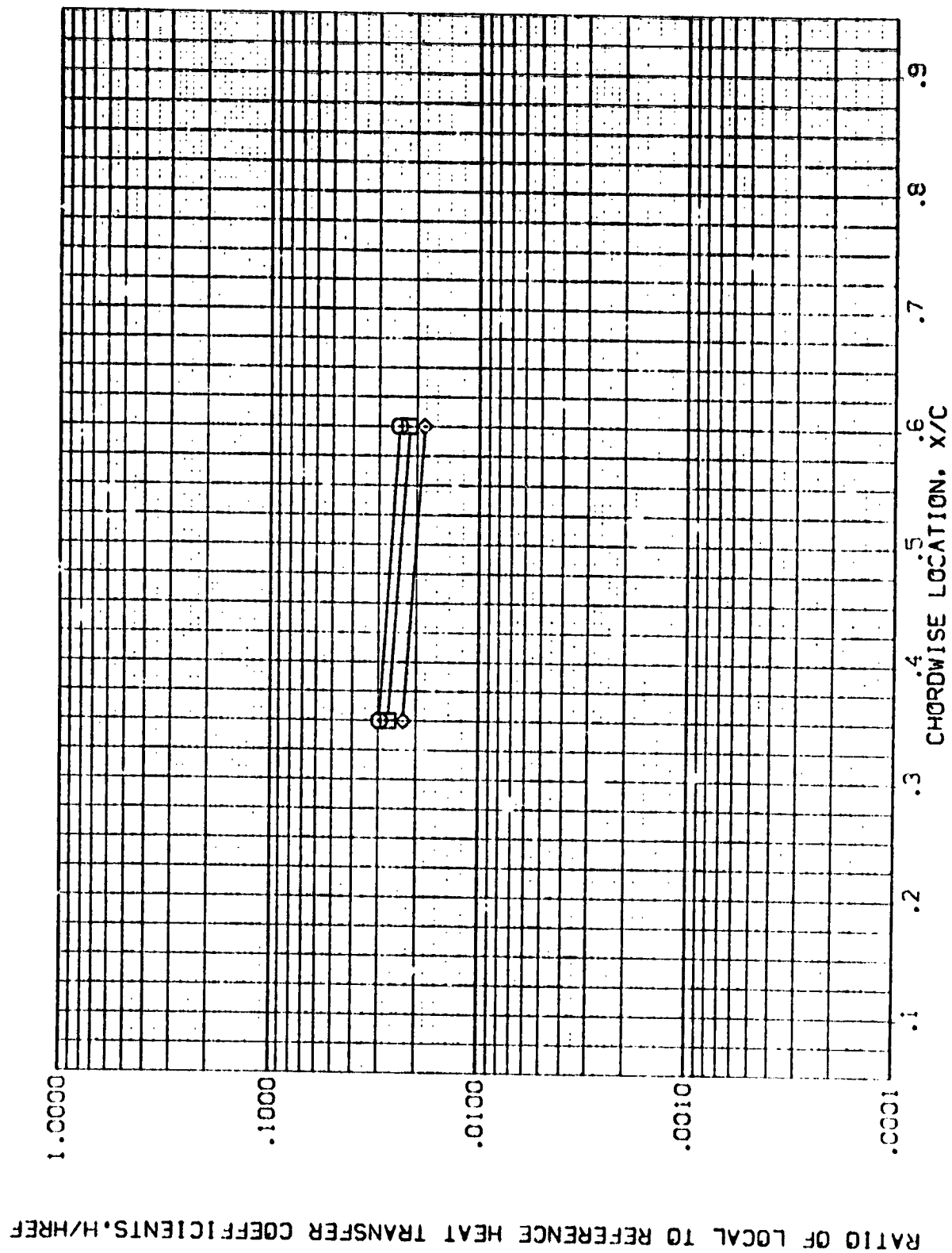


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

DATA SET SYM- CONFIGURATION DESCRIPTION ALPHA BETA R/L

1	1.000	1.000	1.000
2	1.000	1.000	1.000
3	1.000	1.000	1.000
4	1.000	1.000	1.000
5	1.000	1.000	1.000
6	1.000	1.000	1.000
7	1.000	1.000	1.000
8	1.000	1.000	1.000
9	1.000	1.000	1.000
10	1.000	1.000	1.000
11	1.000	1.000	1.000
12	1.000	1.000	1.000
13	1.000	1.000	1.000
14	1.000	1.000	1.000
15	1.000	1.000	1.000
16	1.000	1.000	1.000
17	1.000	1.000	1.000
18	1.000	1.000	1.000
19	1.000	1.000	1.000
20	1.000	1.000	1.000
21	1.000	1.000	1.000
22	1.000	1.000	1.000
23	1.000	1.000	1.000
24	1.000	1.000	1.000
25	1.000	1.000	1.000
26	1.000	1.000	1.000
27	1.000	1.000	1.000
28	1.000	1.000	1.000
29	1.000	1.000	1.000
30	1.000	1.000	1.000
31	1.000	1.000	1.000
32	1.000	1.000	1.000
33	1.000	1.000	1.000
34	1.000	1.000	1.000
35	1.000	1.000	1.000
36	1.000	1.000	1.000
37	1.000	1.000	1.000
38	1.000	1.000	1.000
39	1.000	1.000	1.000
40	1.000	1.000	1.000
41	1.000	1.000	1.000
42	1.000	1.000	1.000
43	1.000	1.000	1.000
44	1.000	1.000	1.000
45	1.000	1.000	1.000
46	1.000	1.000	1.000
47	1.000	1.000	1.000
48	1.000	1.000	1.000
49	1.000	1.000	1.000
50	1.000	1.000	1.000
51	1.000	1.000	1.000
52	1.000	1.000	1.000
53	1.000	1.000	1.000
54	1.000	1.000	1.000
55	1.000	1.000	1.000
56	1.000	1.000	1.000
57	1.000	1.000	1.000
58	1.000	1.000	1.000
59	1.000	1.000	1.000
60	1.000	1.000	1.000
61	1.000	1.000	1.000
62	1.000	1.000	1.000
63	1.000	1.000	1.000
64	1.000	1.000	1.000
65	1.000	1.000	1.000
66	1.000	1.000	1.000
67	1.000	1.000	1.000
68	1.000	1.000	1.000
69	1.000	1.000	1.000
70	1.000	1.000	1.000
71	1.000	1.000	1.000
72	1.000	1.000	1.000
73	1.000	1.000	1.000
74	1.000	1.000	1.000
75	1.000	1.000	1.000
76	1.000	1.000	1.000
77	1.000	1.000	1.000
78	1.000	1.000	1.000
79	1.000	1.000	1.000
80	1.000	1.000	1.000
81	1.000	1.000	1.000
82	1.000	1.000	1.000
83	1.000	1.000	1.000
84	1.000	1.000	1.000
85	1.000	1.000	1.000
86	1.000	1.000	1.000
87	1.000	1.000	1.000
88	1.000	1.000	1.000
89	1.000	1.000	1.000
90	1.000	1.000	1.000
91	1.000	1.000	1.000
92	1.000	1.000	1.000
93	1.000	1.000	1.000
94	1.000	1.000	1.000
95	1.000	1.000	1.000
96	1.000	1.000	1.000
97	1.000	1.000	1.000
98	1.000	1.000	1.000
99	1.000	1.000	1.000
100	1.000	1.000	1.000

RATIO OF LOCAL TO REFERENCE HEAT TRANSFER COEFFICIENTS, H/HREF

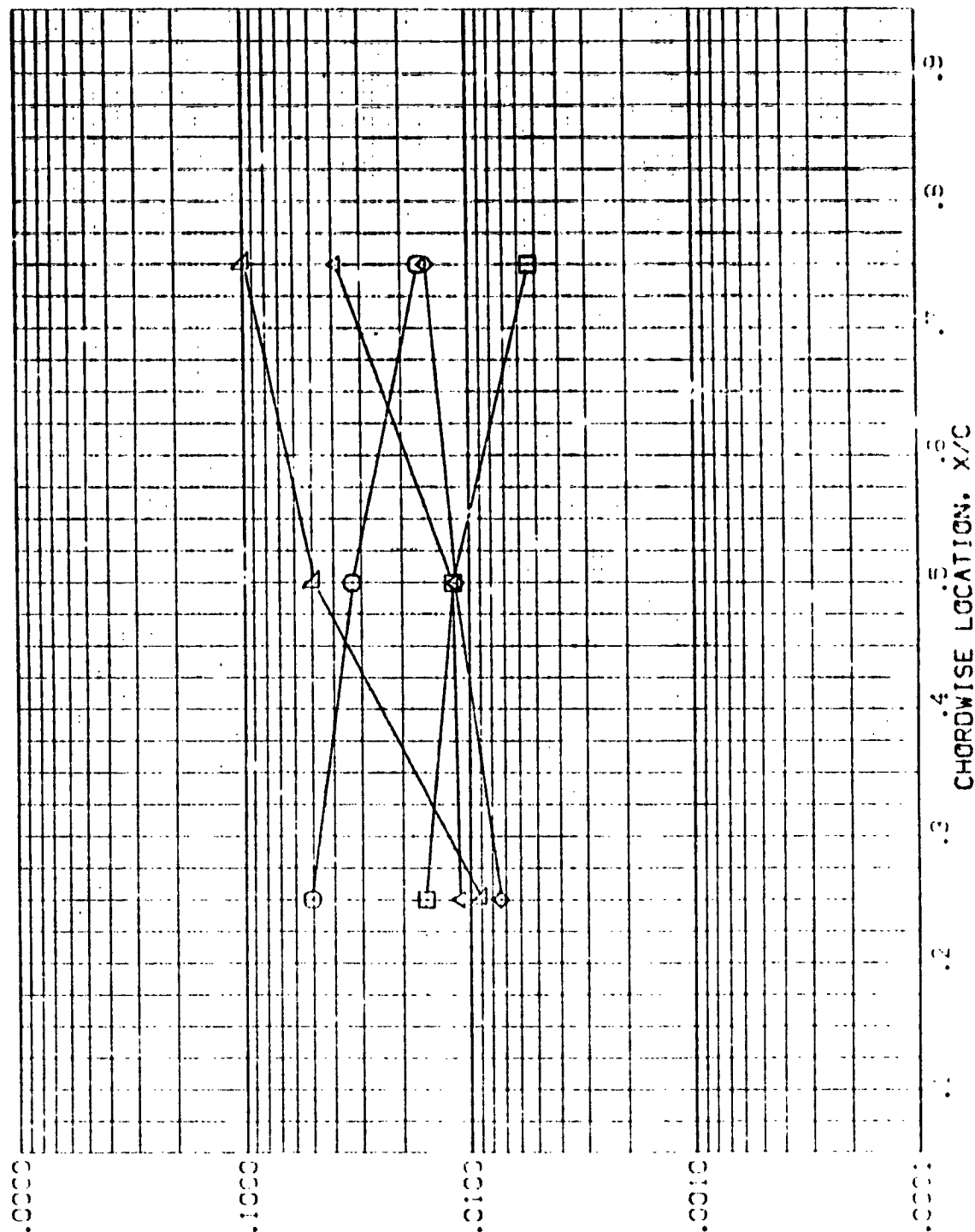


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 $\gamma = 1.4$ $\mu = 1.000$ $Z = 596.000$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(MEVH01)	AMES 3.5-195 IH28 C1+T1 VERTICAL TAIL	.000	.000	1.000
(MEVH02)	AMES 3.5-195 IH28 C1+T1 VERTICAL TAIL	30.000	.030	1.000
(MEVH03)	AMES 3.5-195 IH28 C1+T1 VERTICAL TAIL	60.000	.000	1.000
(MEVH04)	AMES 3.5-195 IH28 C1+T1 VERTICAL TAIL	90.000	.000	1.000
(MEVH05)	AMES 3.5-195 IH28 C1+T1 VERTICAL TAIL	120.000	.000	1.000

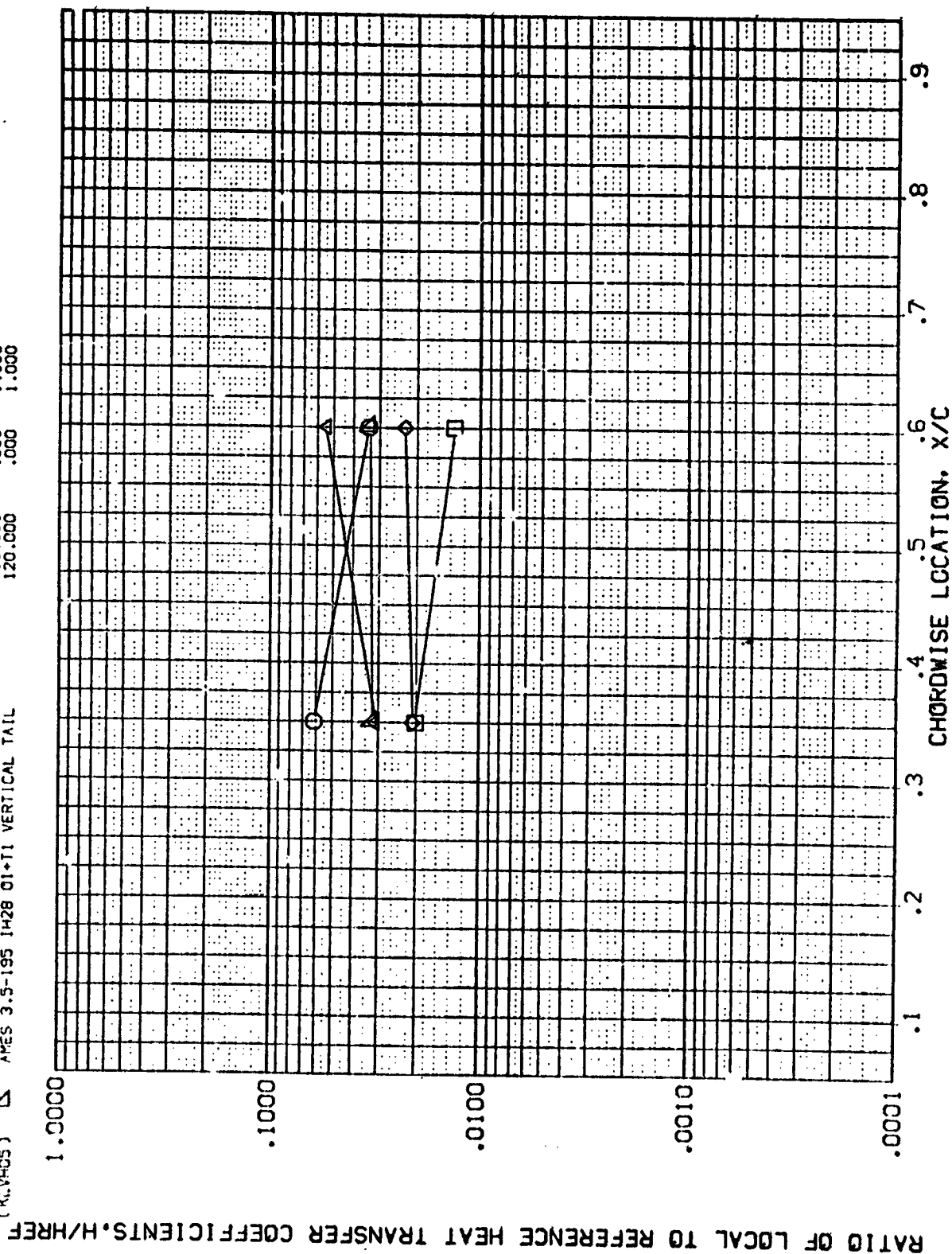


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 736 670

DATA SET SYMBOL CONFIGURATION DESCRIPTION

AMES 3.5-195 H28 01+T1 VERTICAL TAIL
 AMES 3.5-195 H28 01+T1 VERTICAL TAIL
 AMES 3.5-195 H28 01+T1 VERTICAL TAIL
 AMES 3.5-195 H28 01+T1 VERTICAL TAIL

ALPH. BETA RN/L
 .000 .000 1.000
 -30.000 .000 1.000
 -60.000 .000 1.000
 -90.000 .000 1.000
 -120.000 .000 1.000

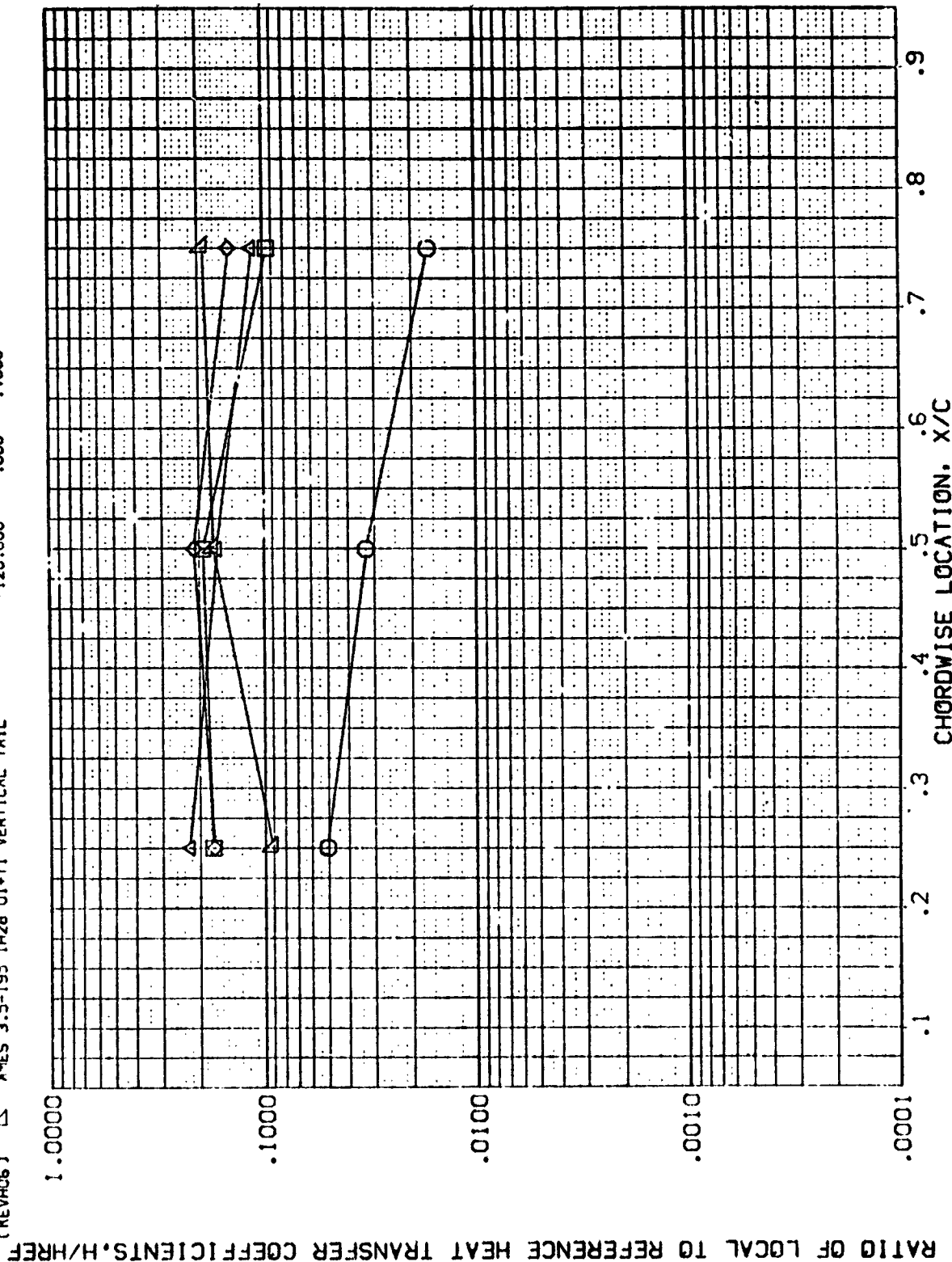


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 596.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH01)	AVES 3.5-195 [H28 01+T1] VERTICAL TAIL	.000	.000	1.000
(KEVH09)	AVES 3.5-195 [H28 01+T1] VERTICAL TAIL	-30.000	.000	1.000
(KEVH08)	AVES 3.5-195 [H28 01+T1] VERTICAL TAIL	-60.000	.000	1.000
(KEVH07)	AVES 3.5-195 [H28 01+T1] VERTICAL TAIL	-90.000	.000	1.000
(KEVH06)	AVES 3.5-195 [H28 01+T1] VERTICAL TAIL	-120.000	.000	1.000

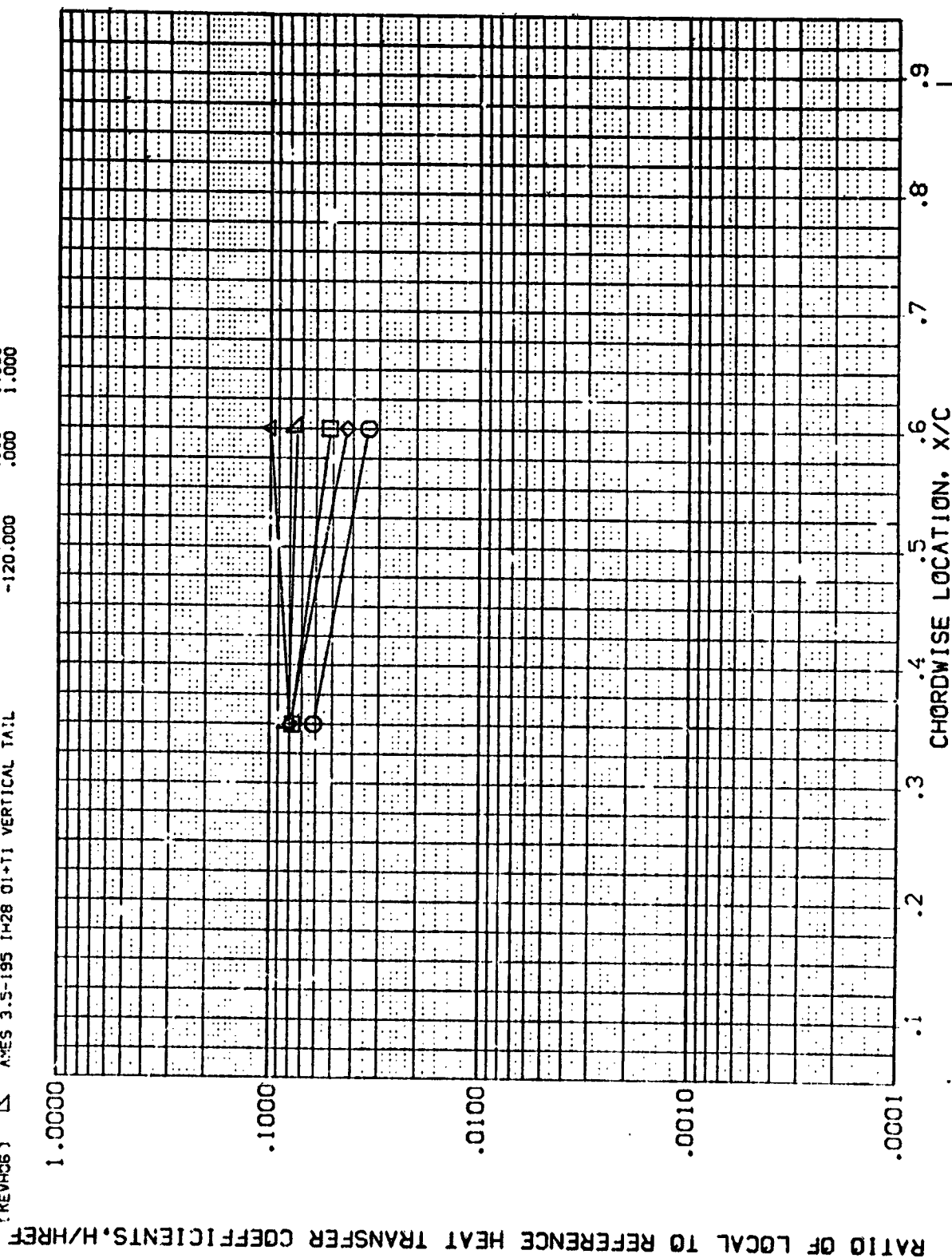


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 736.673

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (REVH02) AMES 3.5-195 I428 O1+T1 VERTICAL TAIL
 (REVH11) AMES 3.5-195 I428 O1+T1 VERTICAL TAIL
 (REVH03) AMES 3.5-195 I428 O1+T1 VERTICAL TAIL
 (REVH10) AMES 3.5-195 I428 O1+T1 VERTICAL TAIL

ALPHA BETA RN/L
 30.000 .000 1.000
 30.000 .000 4.000
 60.000 .000 1.000
 60.000 .000 4.000

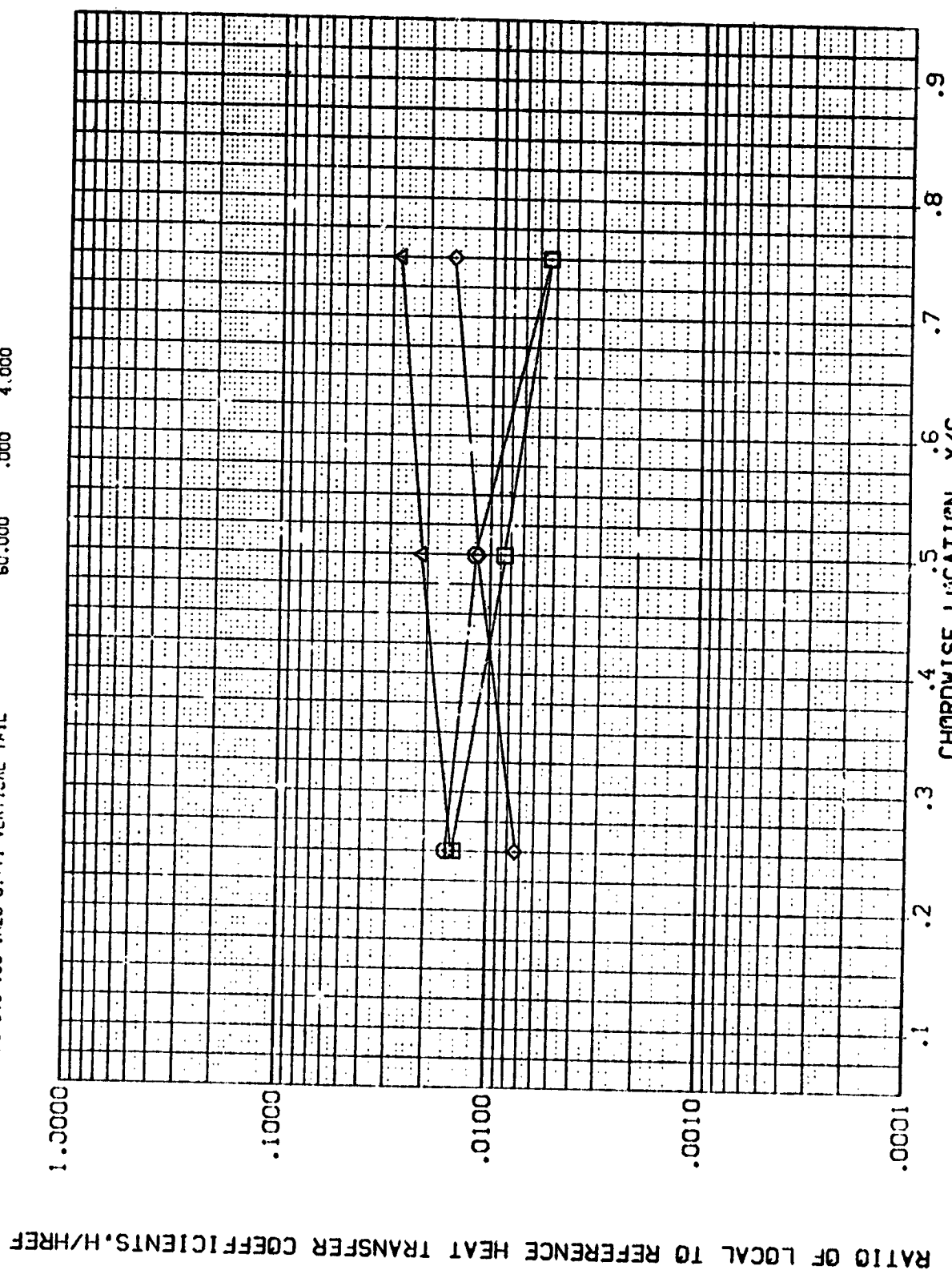


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 596 CDO

DATA SET SYMBOL
 (KEVH02)
 (KEVH01)
 (KEVH03)
 (KEVH10)

CONFIGURATION DESCRIPTION
 ANES 3.5-195 (H28 01+1) VERTICAL TAIL
 ANES 3.5-195 (H28 01+1) VERTICAL TAIL
 ANES 3.5-195 (H28 01+1) VERTICAL TAIL

ALPHA
 .000
 .000
 .000
 .000

BETA
 .000
 .000
 .000
 .000

RM/L
 1.000
 4.000
 1.000
 4.000

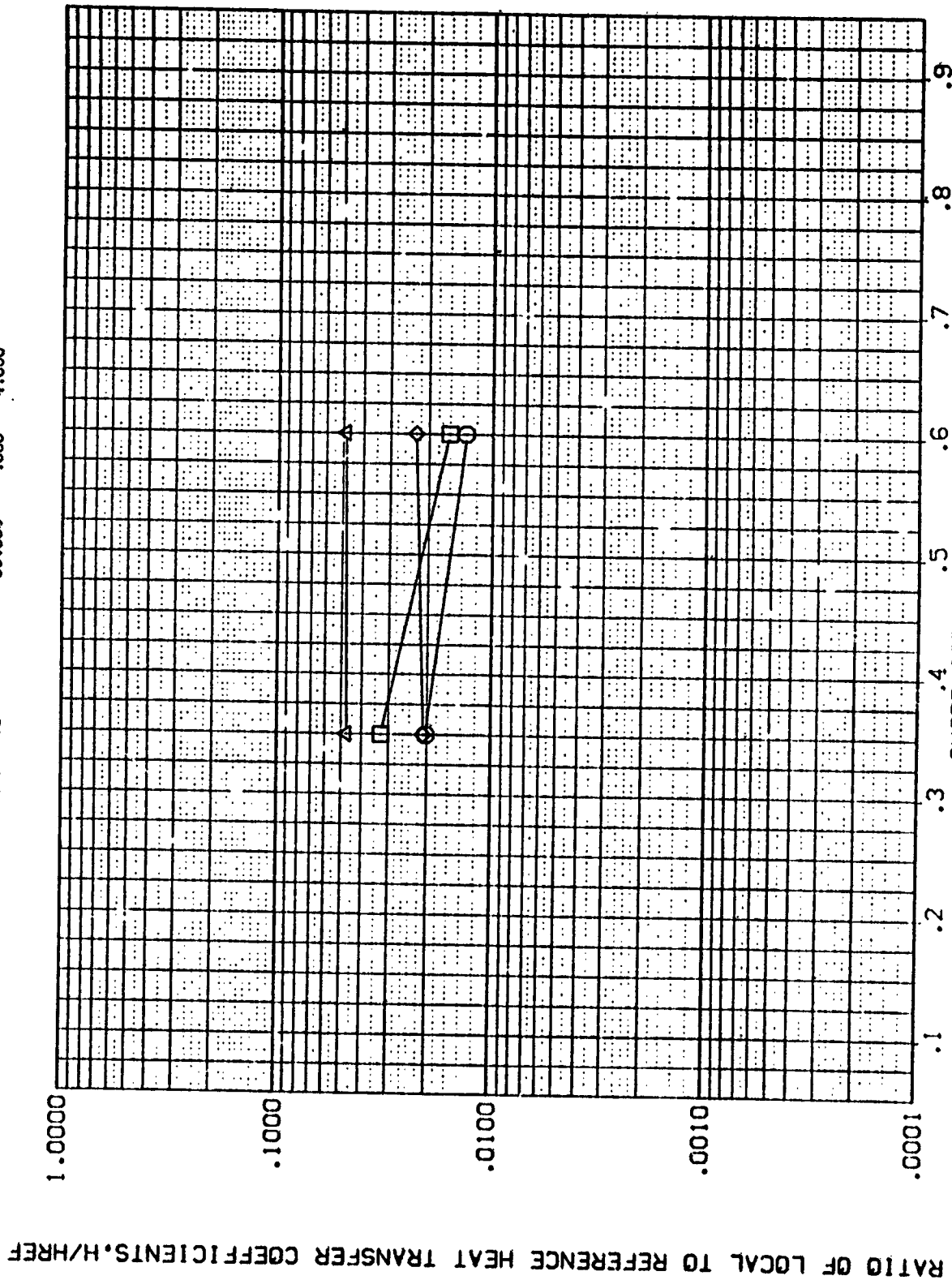


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 736.67C

DATA SET SYMBOL: **H** CONFIGURATION DESCRIPTION:
 AMES 3.5-195 H28 01-T1 VERTICAL TAIL
 AMES 3.5-195 H28 01-T1 VERTICAL TAIL

ALPHA BETA RV/L
 30.000 .000 1.000
 30.000 -5.000 1.000

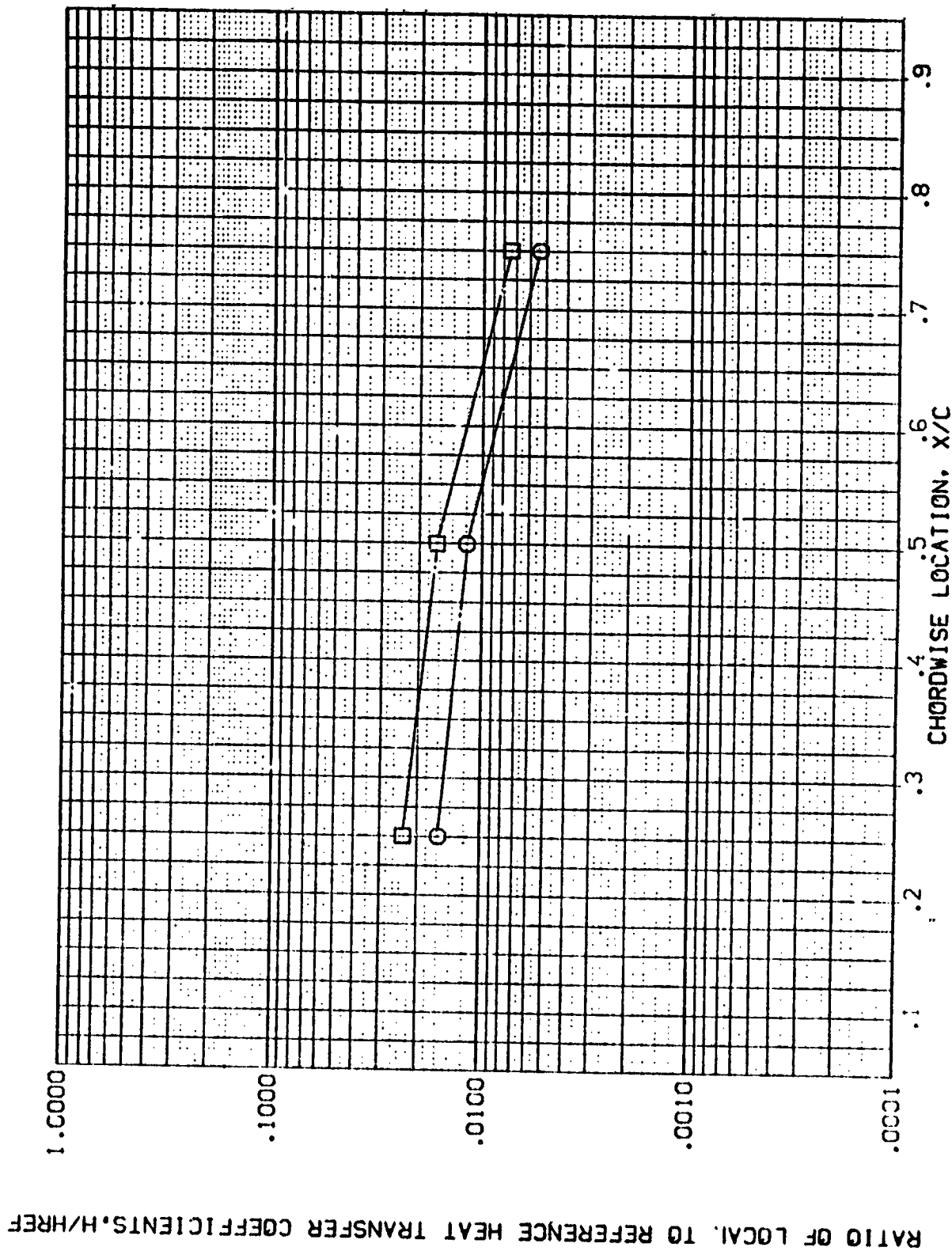


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 596 000

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA BETA RN/L

(MEVH02) AMES 3.5-195 IM28 01+11 VERTICAL TAIL 30.000 .000 1.000

(MEVH12) AMES 3.5-195 IM28 01+11 VERTICAL TAIL 30.000 -5.000 1.000

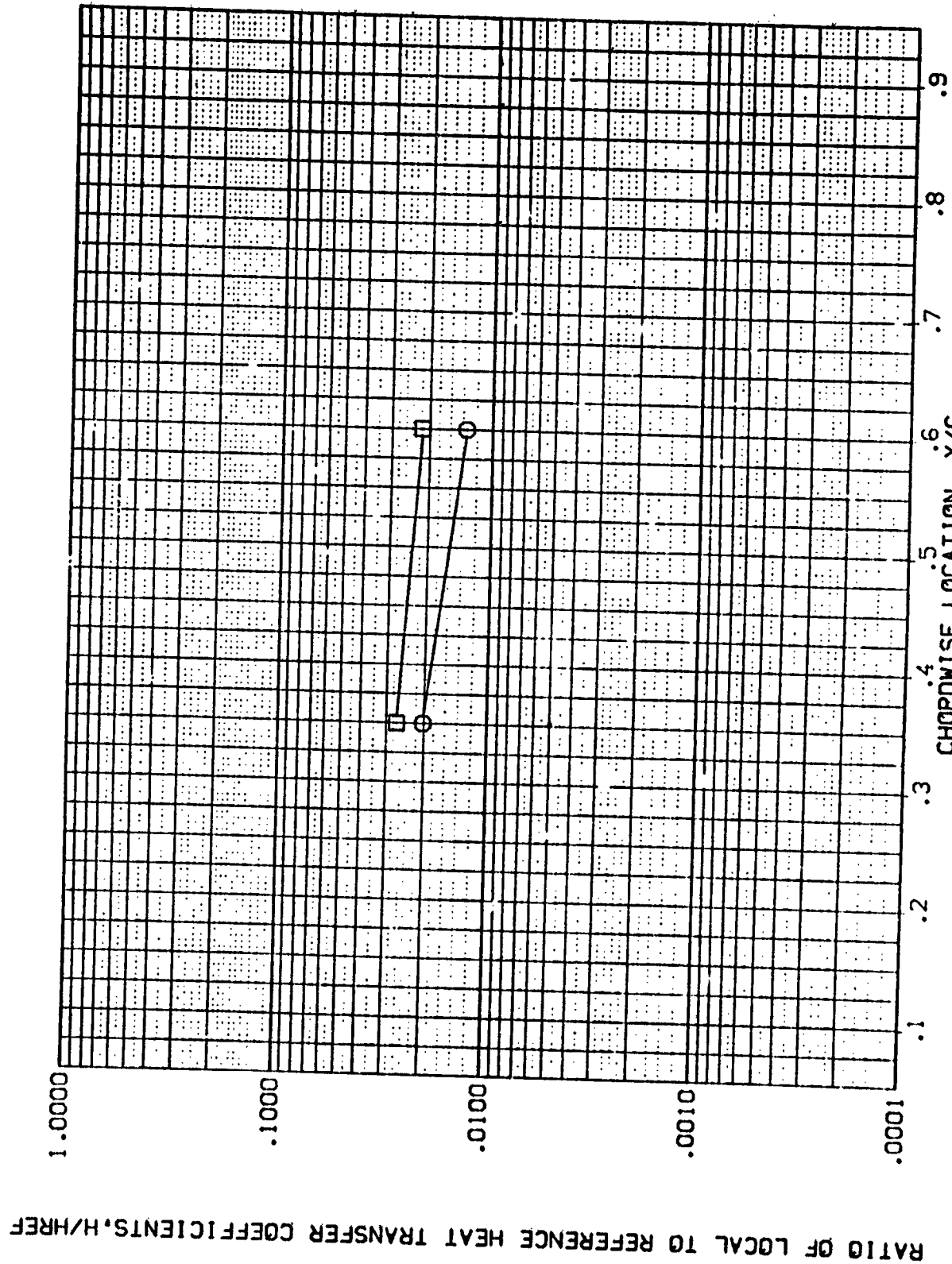


FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT = .900 Z = 736.670

(BEVH01)

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

PARAMETRIC VALUES
ALPHA .000
BETA 1.000
RV/L .000

SYMBOL Z
596.000
736.670
MAC= .900
5.228

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

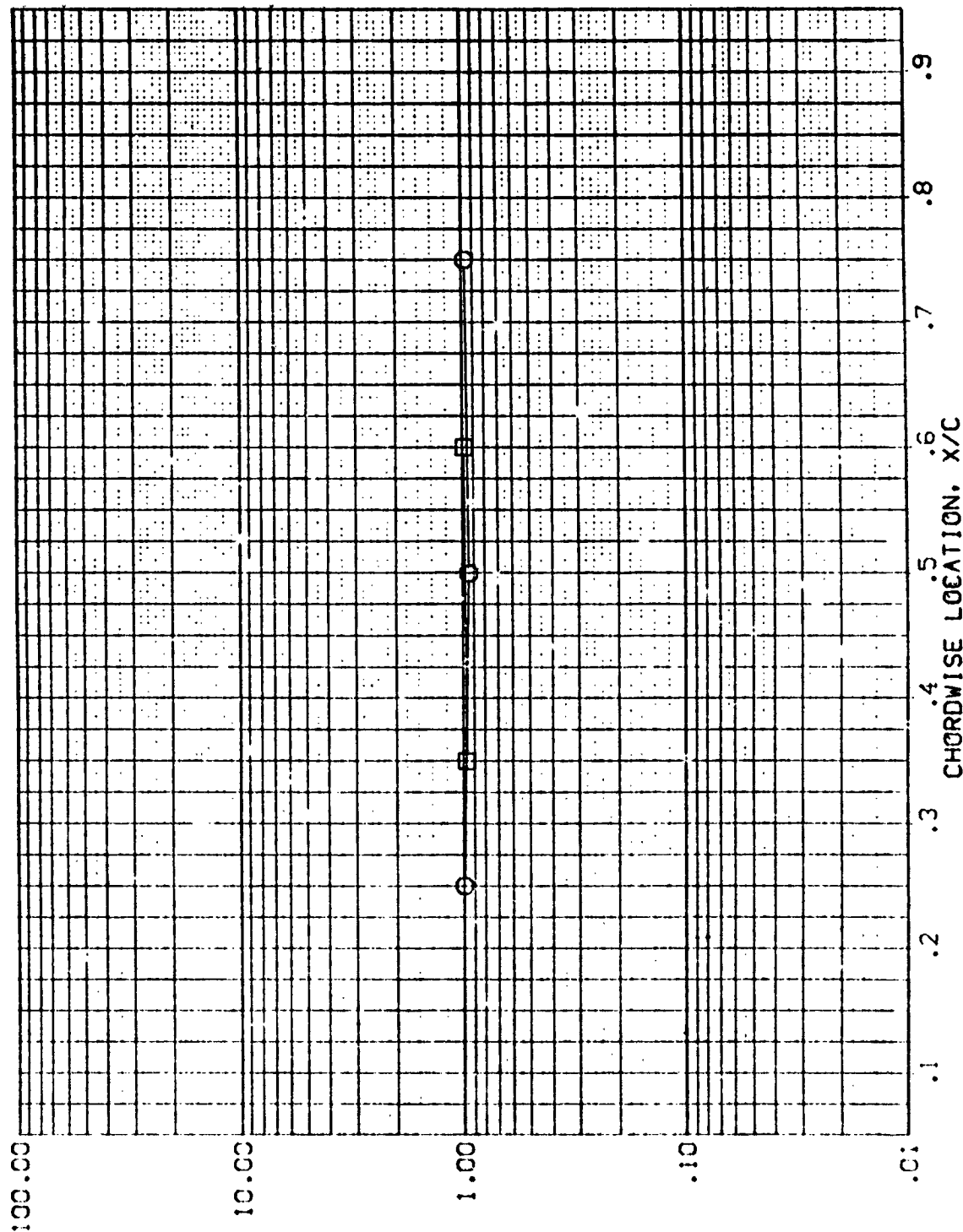


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

(BEVH02)

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

SYMBOL	Z	HAW/HT	MACH	ALPHA	PARAMETRIC VALUES	BETA	
□	595.000	.900	5.219	RN/L	30.000		.000
	736.670				1.000		

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

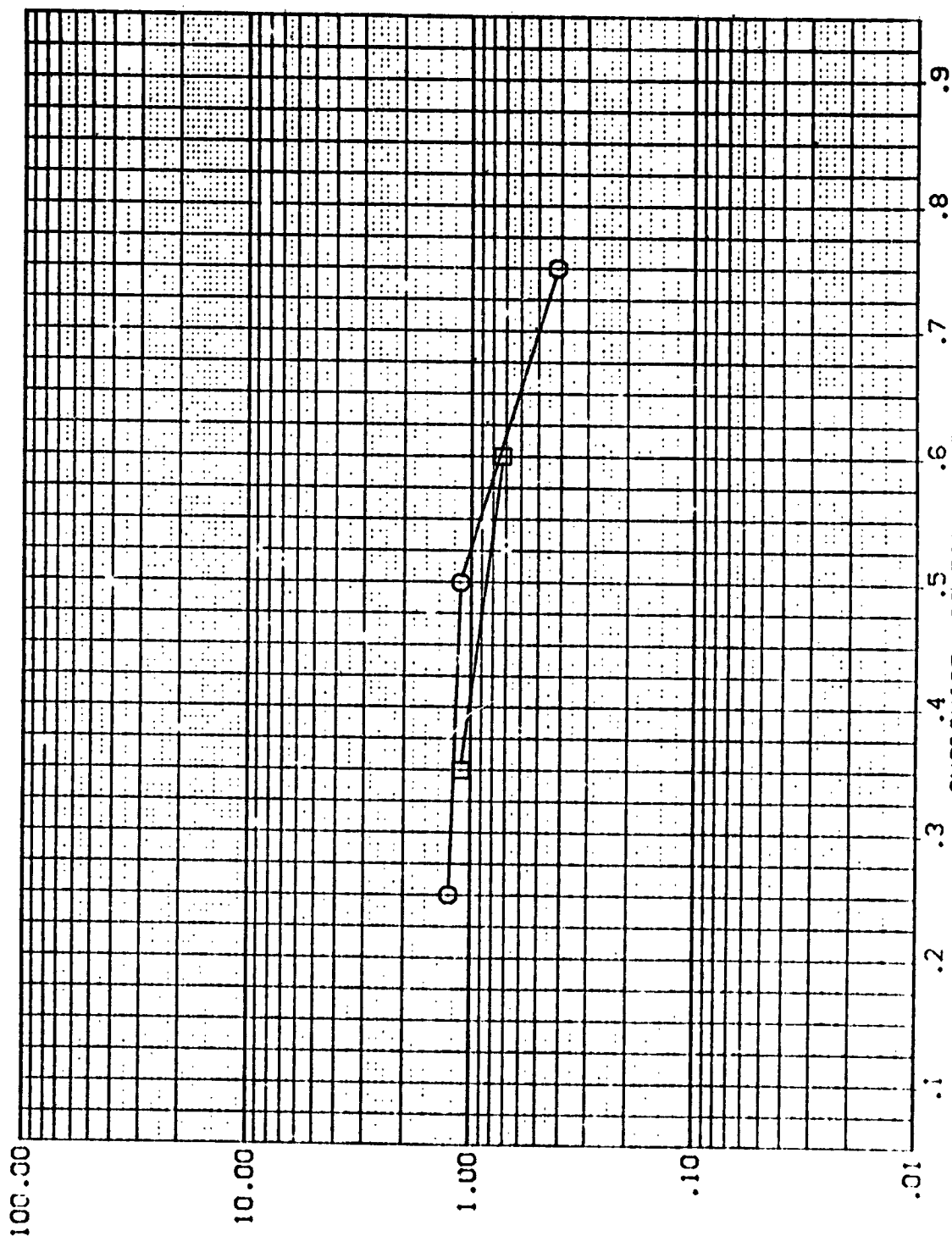


FIG. 27 VERTICAL TAIL. RATIO OF INTERFERENCE TO UNDISTURBED

(BEVH03)

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

SIMPL 2
595.033
735.673

HAW/HT MACH
.900 5.220

PARAMETRIC VALUES
ALPHA 60.000 BETA .000
RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

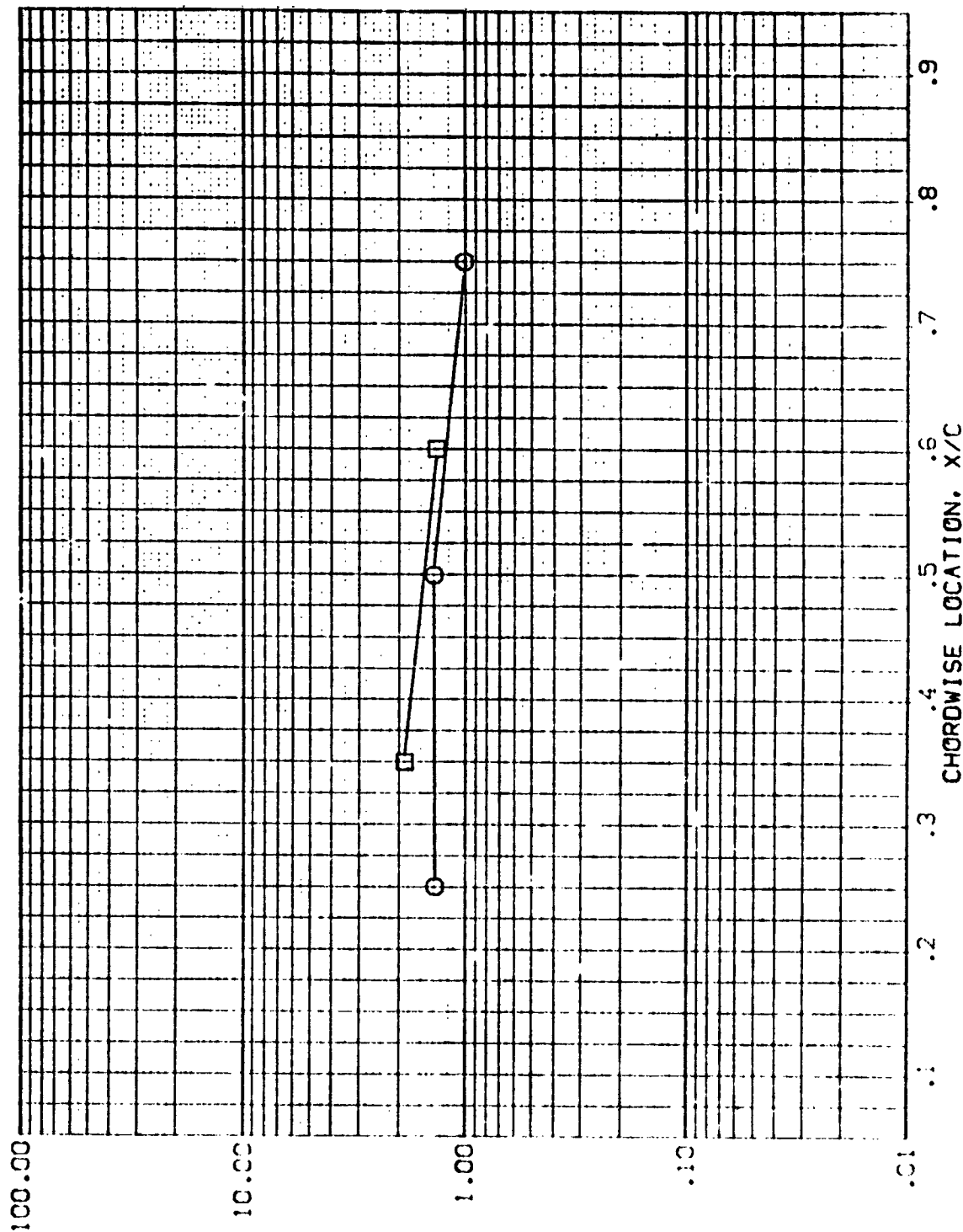


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(BEVHC4)

SWR: Z 595.030
736.670

HAW/HT .900

MACH 5.219

PARAMETRIC VALUES
ALPHA 90.000 BETA .000
RN/L 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

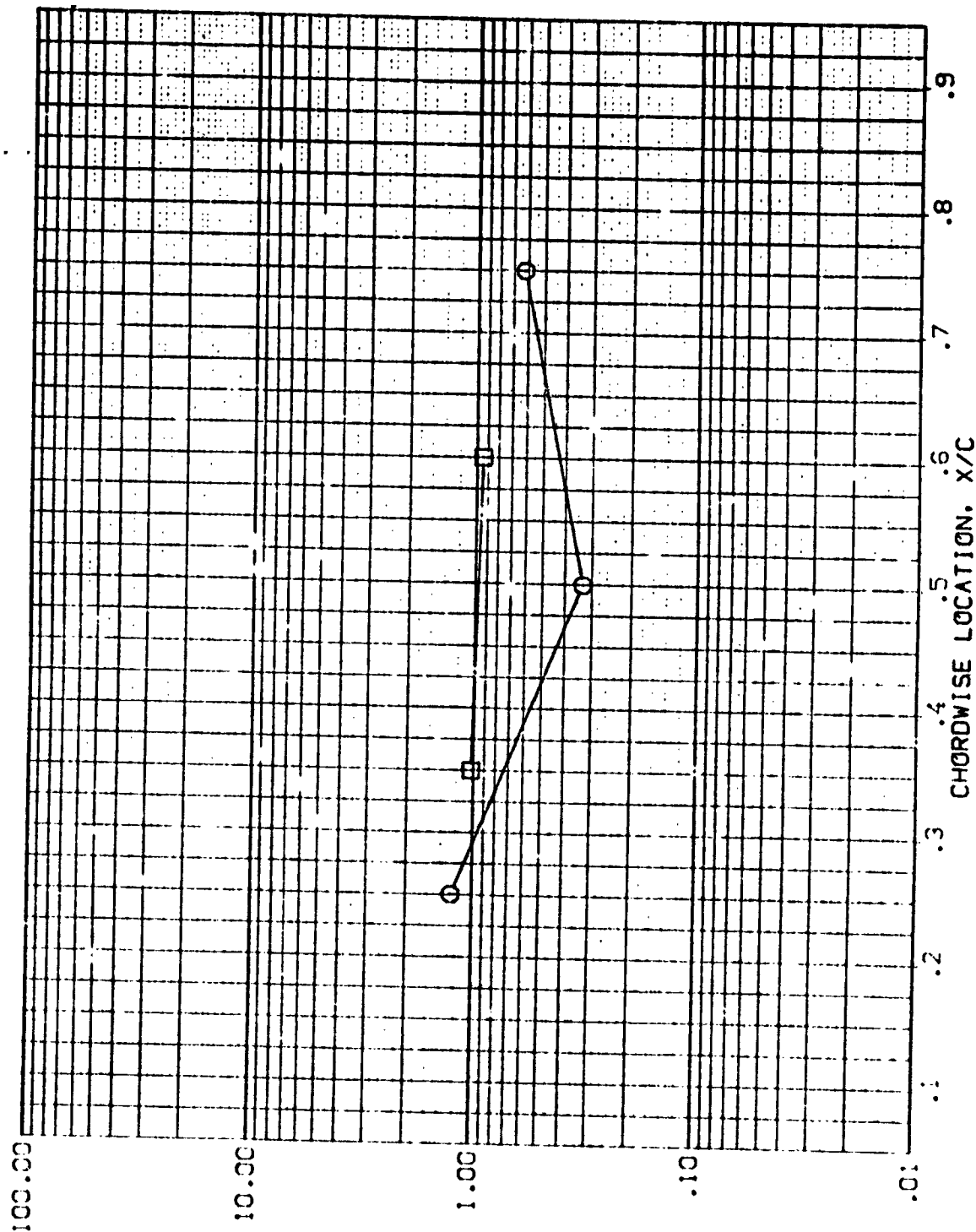


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AVES 3.5-195 1428 01+11 VERTICAL TAIL

(BEVH05)

SYMBOL Z HAW/HT WICH
 596.000 .900 5.220
 736.670

PARAMETRIC VALUES
 ALPHA 120.000 BETA .000
 RN/L

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

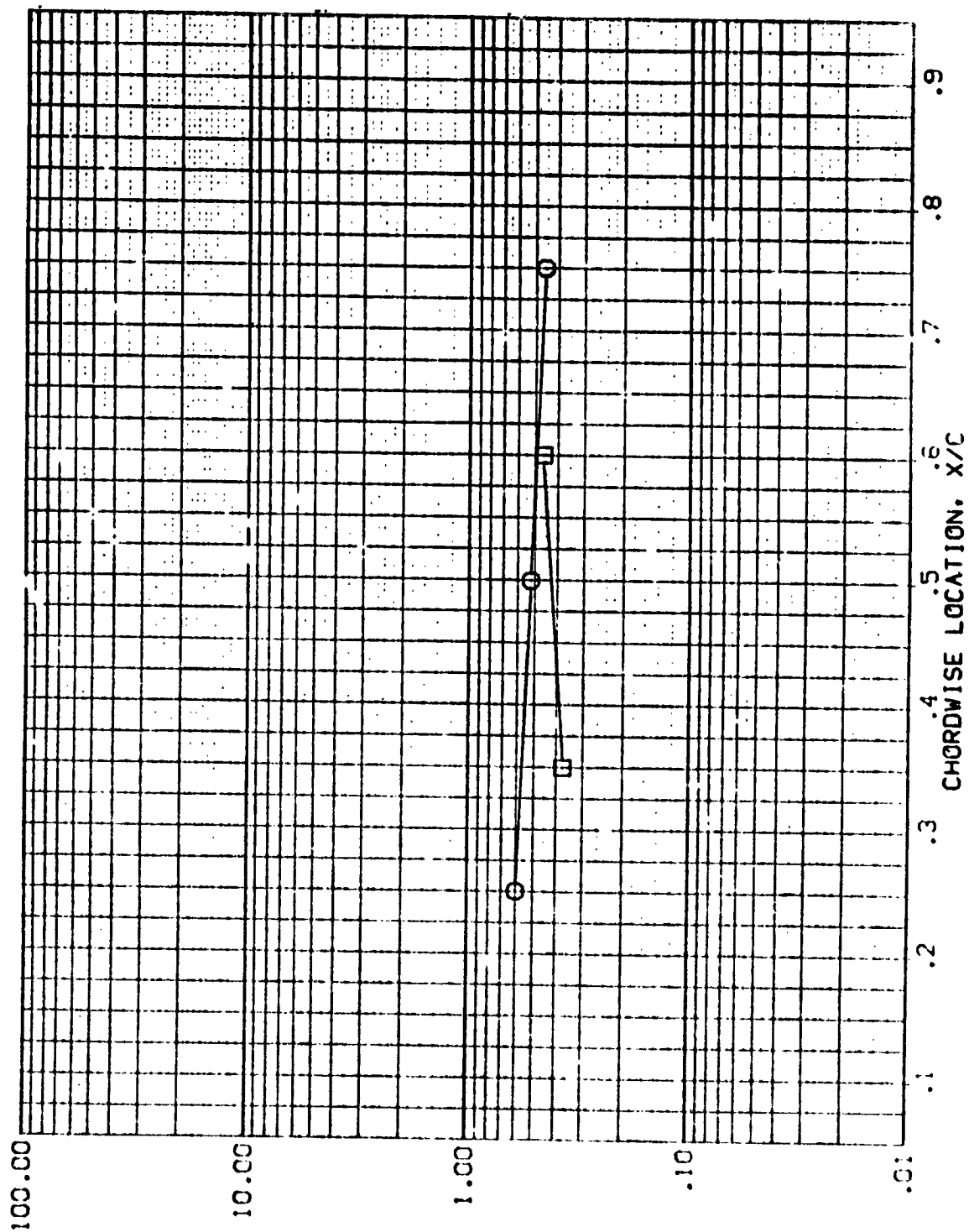


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AYES 3.5-195 IH28 01+T1 VERTICAL TAIL

(BEVH06)

SYMBOL Z
595.030
735.670

MAN/HT .900

MACH 5.220

PARAMETRIC VALUES
ALPHA -120.000
RN/L 1.000
BETA .000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

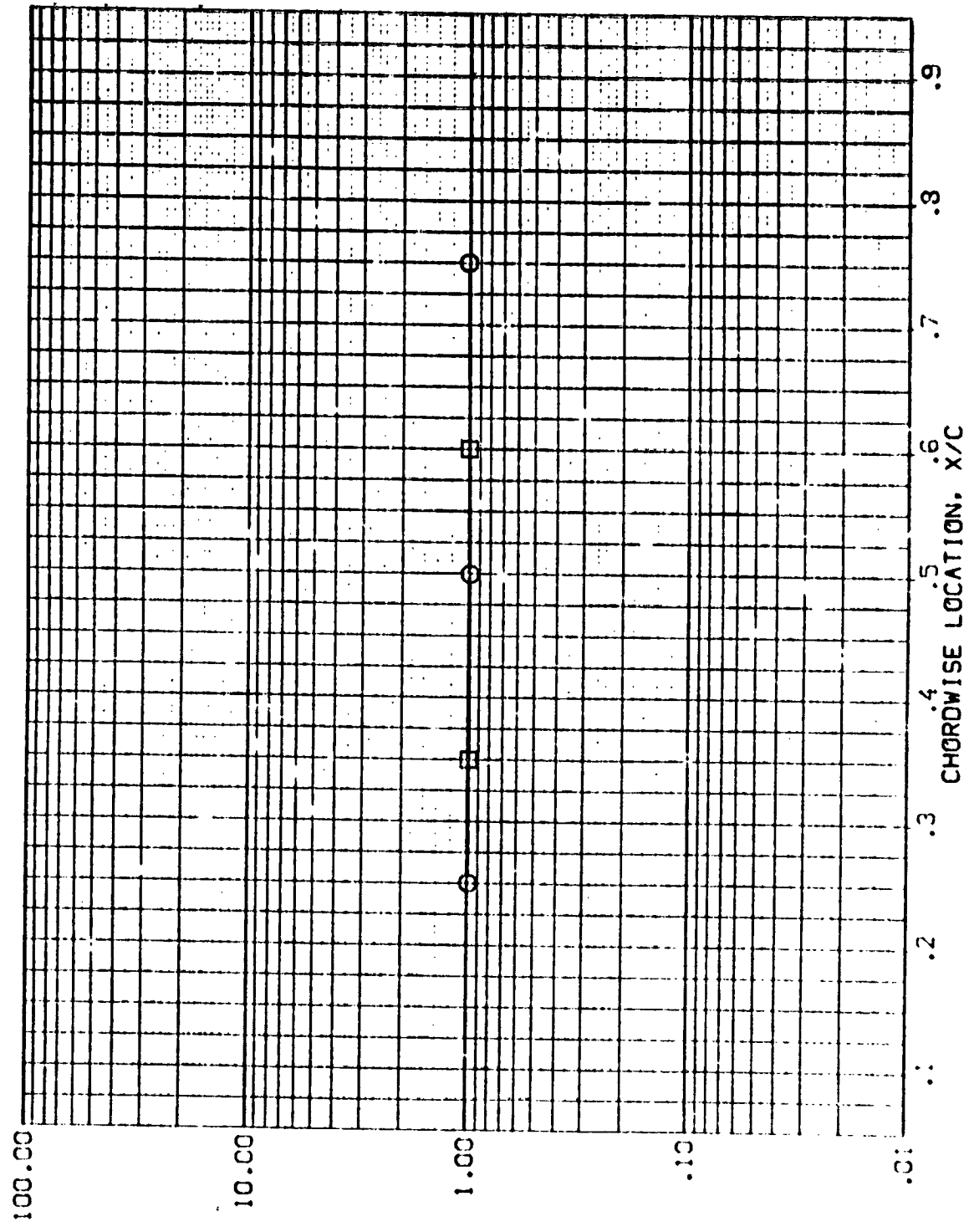


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 1428 01+T1 VERTICAL TAIL

(3E4H07)

\square S_{REF} Z M_{REF}/M_T $MACH$
 595.000 .900 5.219
 735.672

PARAMETRIC VALUES
 α β
 -55.070 1.000
 RN/L

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

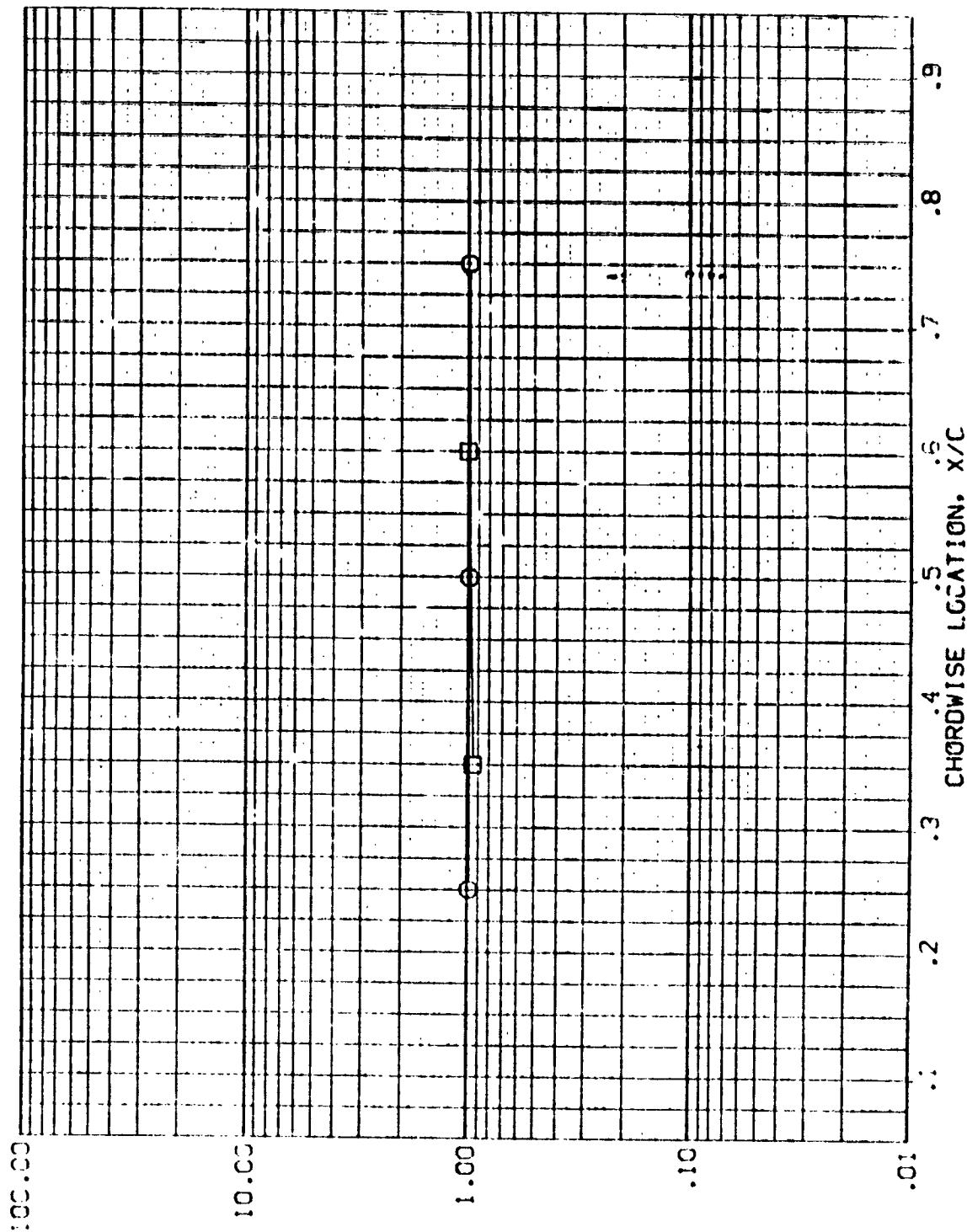


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+11 VERT'CAL TAIL

(BEVH08)

SYMBOL	Z	HAW/HT	MACH	PARAMETRIC VALUES	
	596.000	.900	5.220	-60.000	BETA
	736.670			1.000	.000
				RV/L	

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

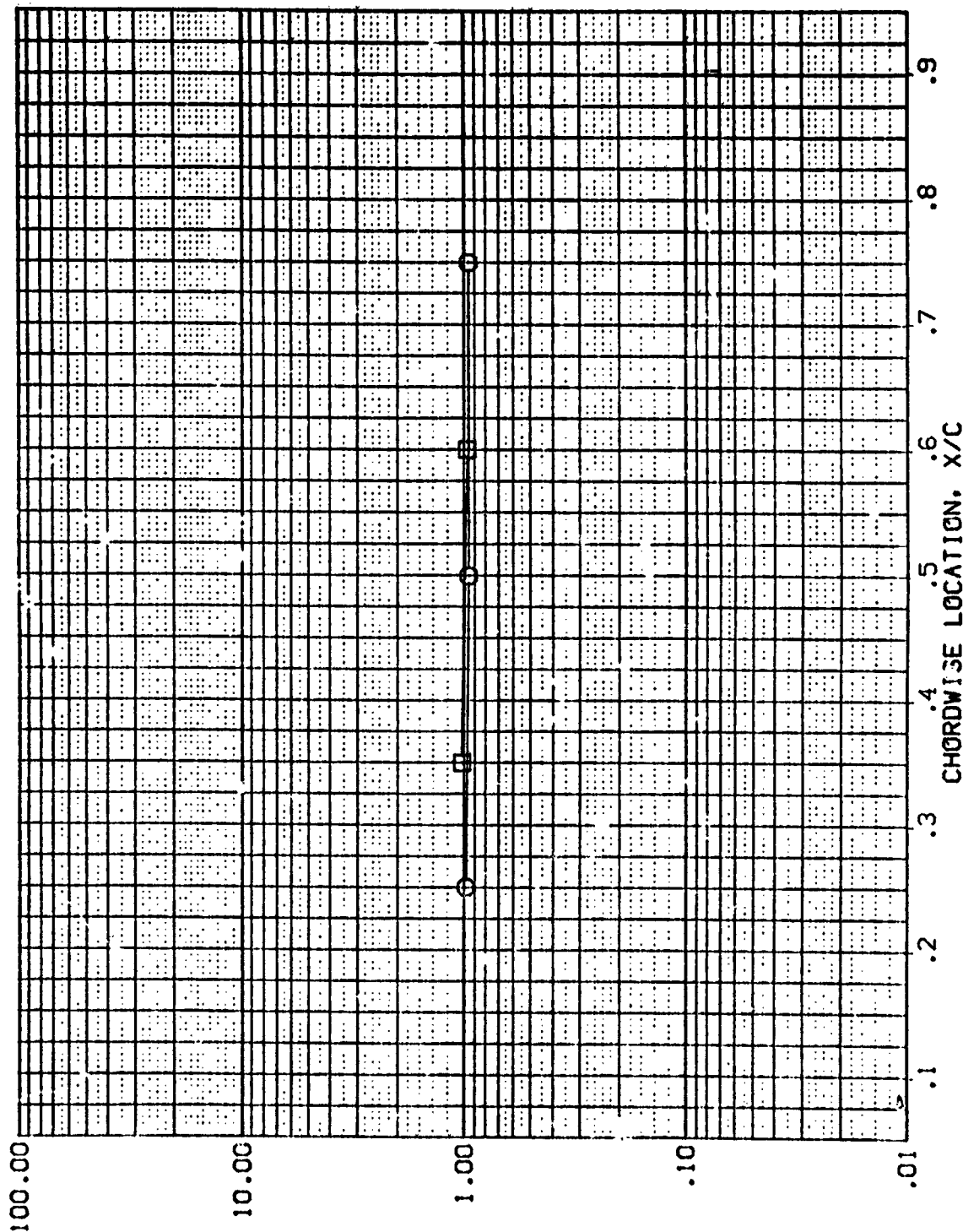


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL

(BEVH09)

SYMBOL Z
 ○ 596.000
 □ 736.670

HAV/HT .900 MACH 5.220

PARAMETRIC VALUES
 -30.000 BETA .000
 1.000

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, h_i/h_u

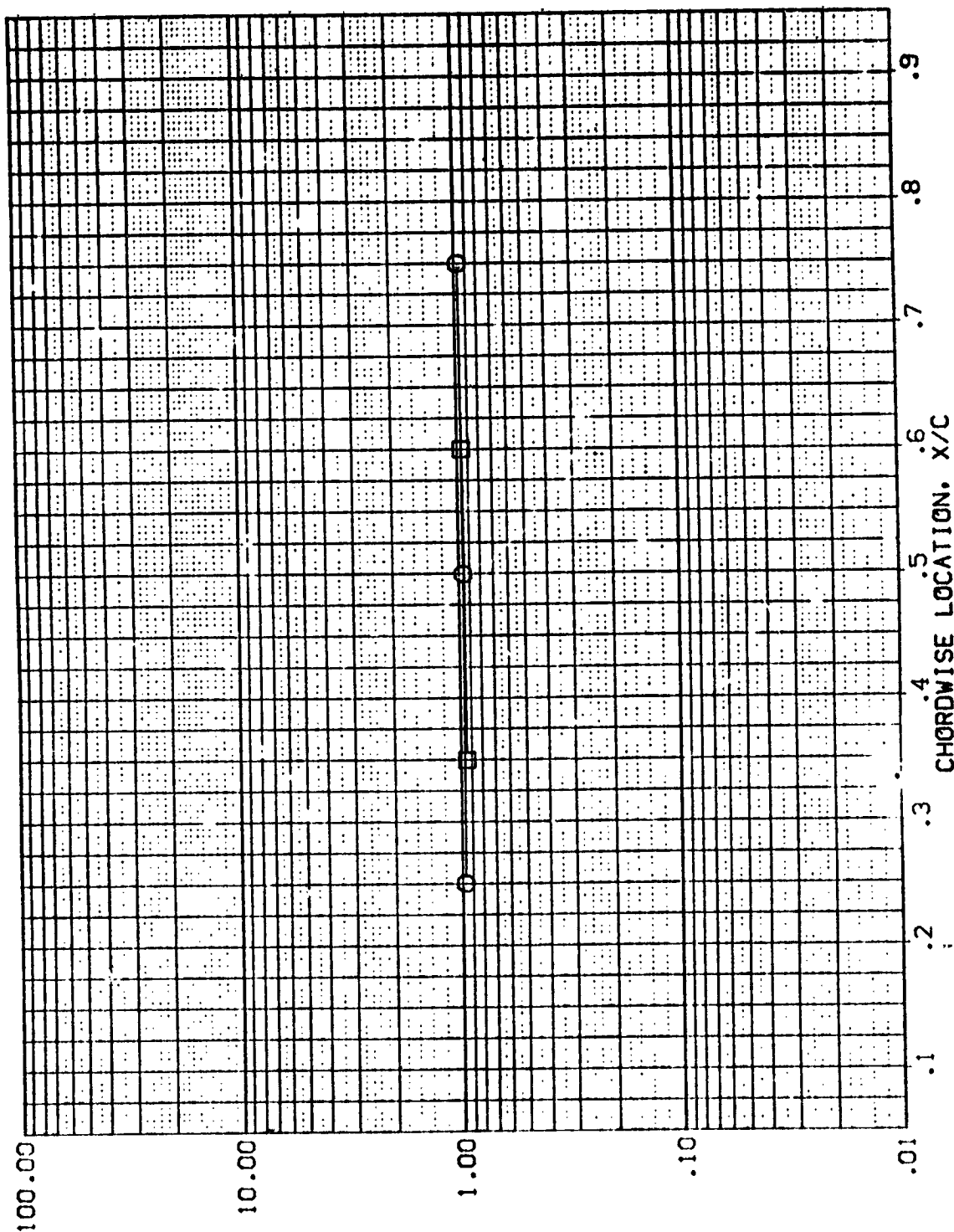


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SET SYMBOL CONFIGURATION DESCRIPTION ALPHA BETA RN/L

(BEVHQ1)	AMES 3.5-195 IM28 01+11 VERTICAL TAIL	.000	.000	1.000
(BEVHQ2)	AMES 3.5-195 IM28 01+11 VERTICAL TAIL	30.000	.000	1.000
(BEVHQ3)	AMES 3.5-195 IM28 01+11 VERTICAL TAIL	60.000	.000	1.000
(BEVHQ4)	AMES 3.5-195 IM28 01+11 VERTICAL TAIL	90.000	.000	1.000
(BEVHQ5)	AMES 3.5-195 IM28 01+11 VERTICAL TAIL	120.000	.000	1.000

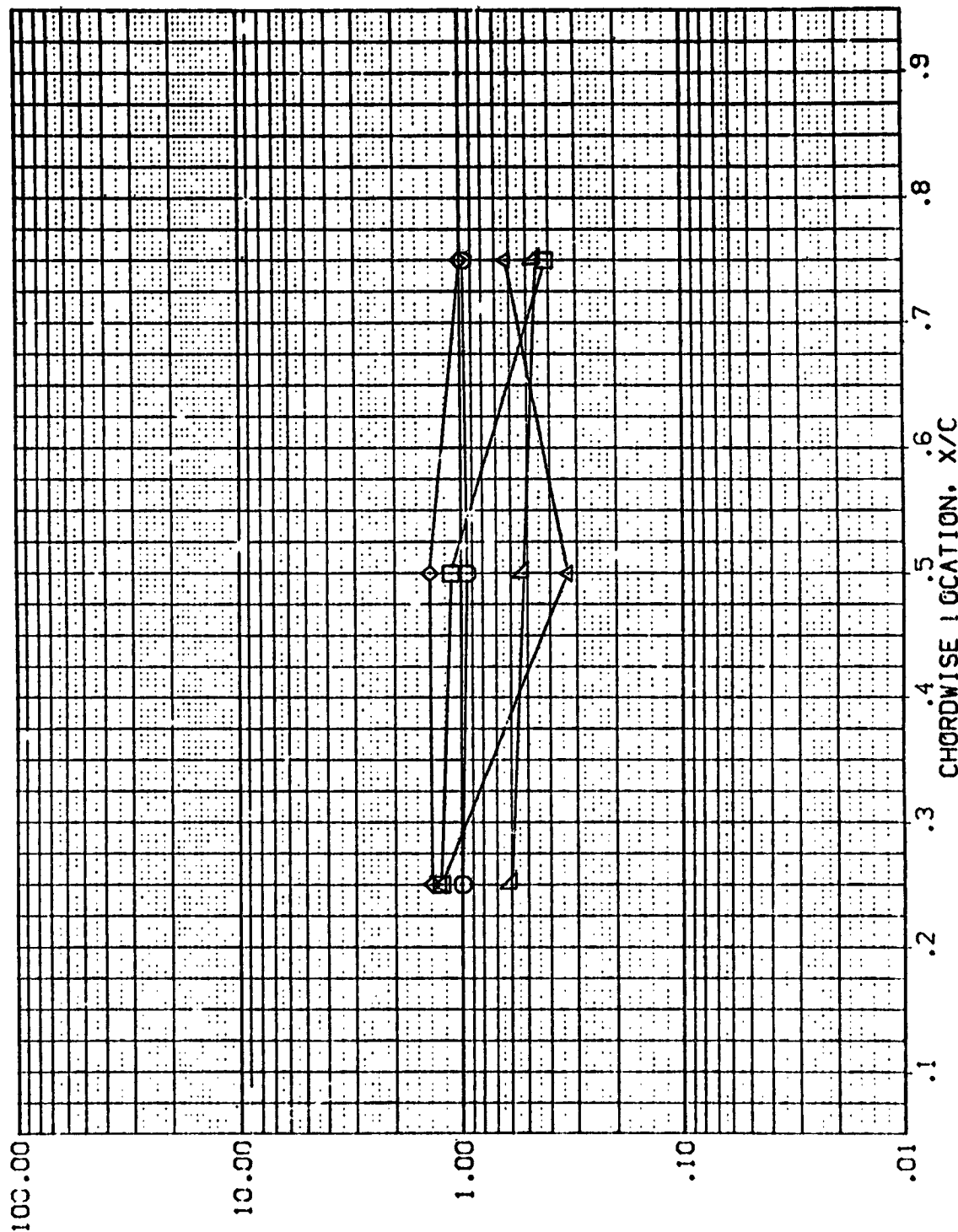


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

RATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BEVH01) AXES 3.5-195 [H28 01+T1] VERTICAL TAIL
 (BEVH02) AXES 3.5-195 [H28 01+T1] VERTICAL TAIL
 (BEVH03) AXES 3.5-195 [H28 01+T1] VERTICAL TAIL
 (BEVH04) AXES 3.5-195 [H28 01+T1] VERTICAL TAIL
 (BEVH05) AXES 3.5-195 [H28 01+T1] VERTICAL TAIL

ALPH BETA RV/L
 .000 .000 1.000
 30.000 .000 1.000
 60.000 .000 1.000
 90.000 .000 1.000
 120.000 .000 1.000

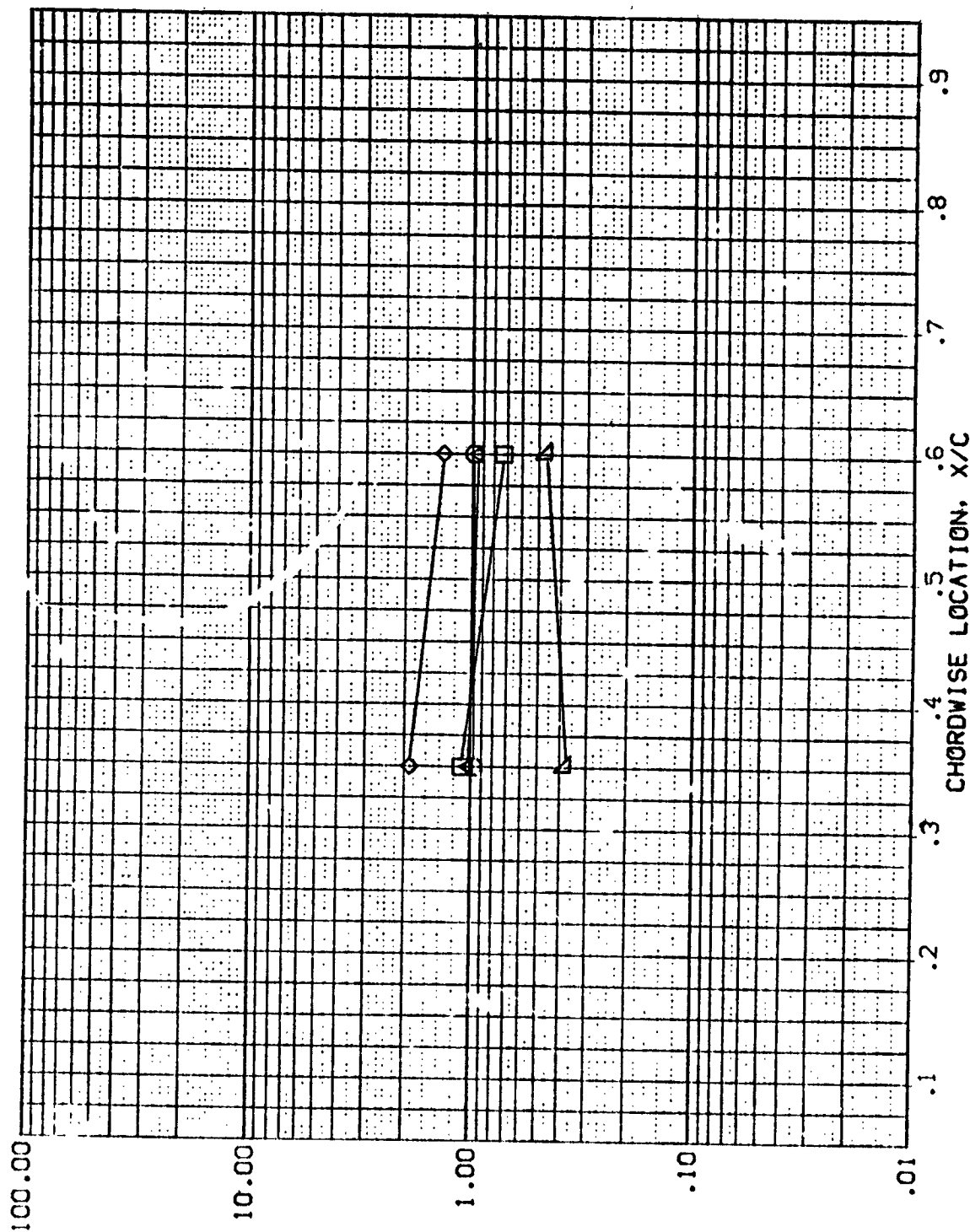


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

CH = 5.300 HAW/HT = .900 Z = 736.670

DATA SET SYMBOL:  CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVH01)	AMES 3.5-195 1428 01+11 VERTICAL TAIL	.000	.000	1.000
(BEVH09)	AMES 3.5-195 1428 01+11 VERTICAL TAIL	-30.000	.000	1.000
(BEVH08)	AMES 3.5-195 1428 01+11 VERTICAL TAIL	-60.000	.000	1.000
(BEVH07)	AMES 3.5-195 1428 01+11 VERTICAL TAIL	-90.000	.000	1.000
(BEVH06)	AMES 3.5-195 1428 01+11 VERTICAL TAIL	-120.000	.000	1.000

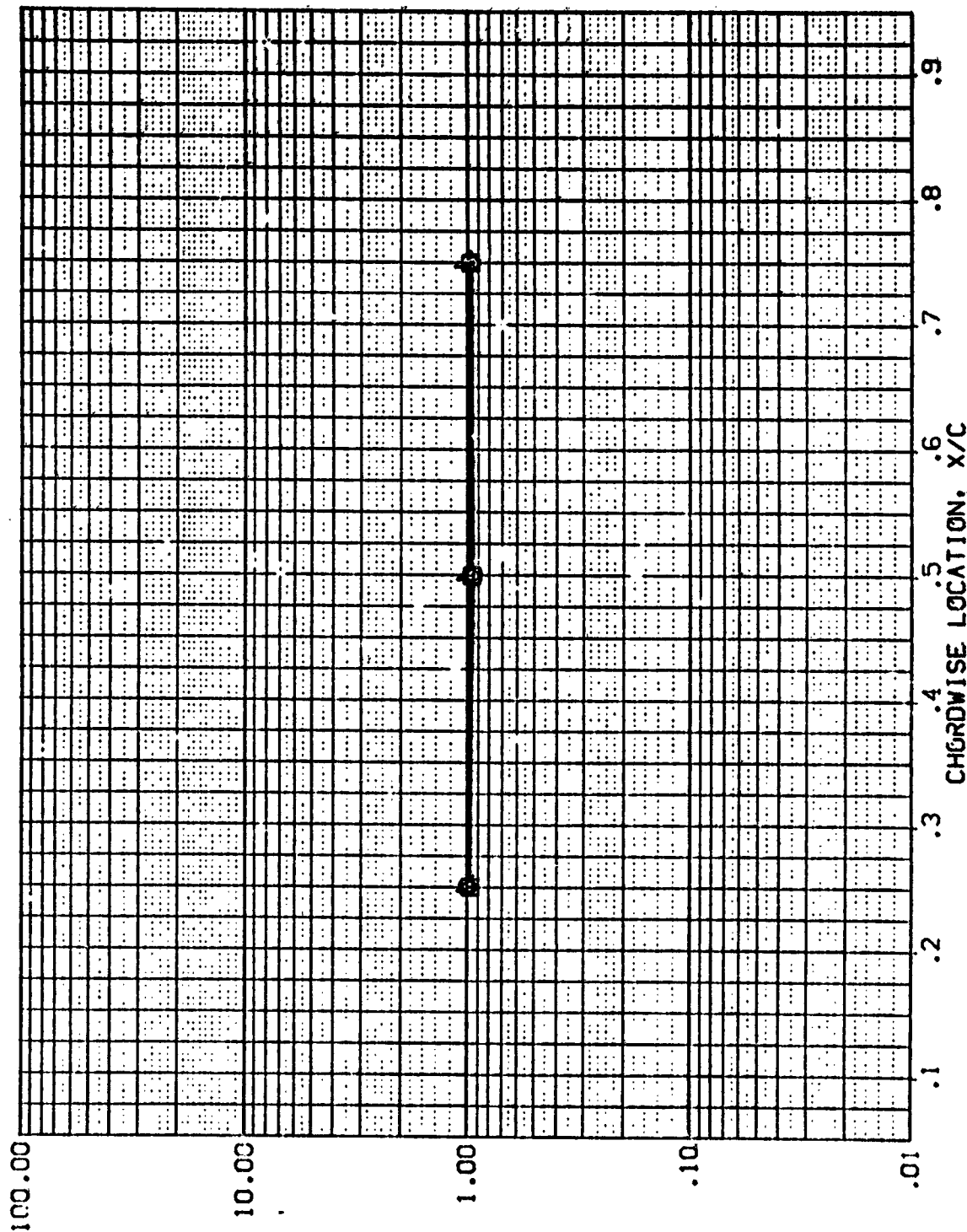


FIG. 27 VERTICAL TAIL, PATIO OF INTERFERENCE TO UNDISTURBED HEAT TRANSFER COEFFICIENTS, HI/HU

WING CHORD = 5.300 HAW/HT = .900 Z = 596.000

DATA SET SYMBS-
 (BEVHC1)
 (BEVHC9)
 (BEVHC8)
 (BEVHC7)
 (BEVHC6)

CONFIGURATION DESCRIPTION

AMES 3.5-195 [H28 01+T] VERTICAL TAIL
 AMES 3.5-195 [H28 01+T] VERTICAL TAIL
 AMES 3.5-195 [H28 01+T] VERTICAL TAIL
 AMES 3.5-195 [H28 01+T] VERTICAL TAIL

ALF-A BETA FN/L
 .000 .000 1.000
 -30.000 .000 1.000
 -60.000 .000 1.000
 -90.000 .000 1.000
 -120.000 .000 1.000

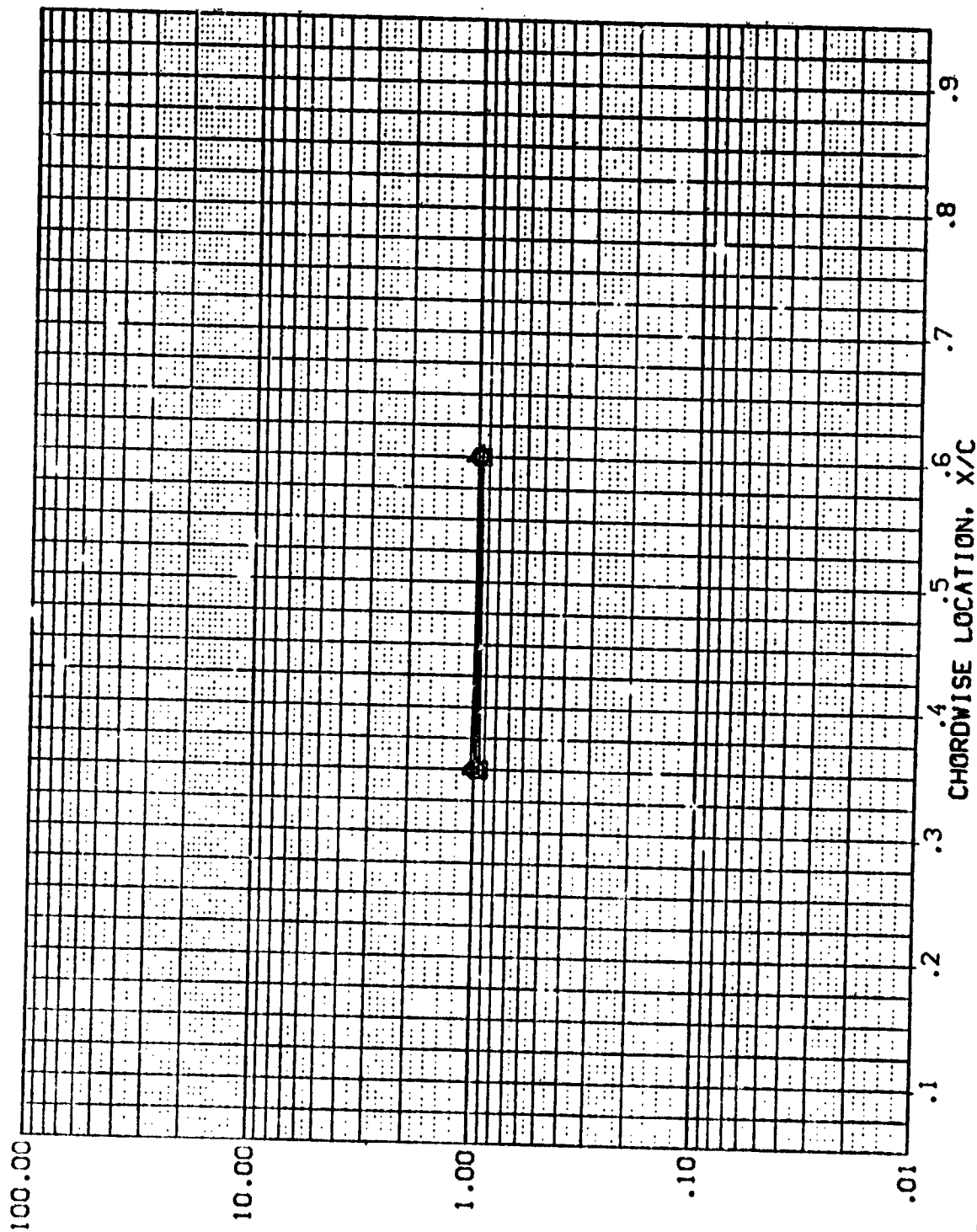


FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT = .900 Z = 736 570

APPENDIX
TABULATED SOURCE DATA

Tabulations of plotted data are available
on request from Data Management Services.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFET FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 195	
MACH 5.23 4.5243E 06 8.8945E 05 LENGTH(METER) : PTIATH) IT(DEC K) HIT(JOULE/KG) RS(METER) RUN NO. 1																
5.23 1.3793E 06 8.8945E 05 LENGTH(FT) PTPST) TT(DEC R) HIT8TU/LBM) RS(FT) ORB MATED																
a = 0° 8 - 0°																
CHAN	T/C	FW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	FW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)			
1	1	0.376	0.1009	0.1009	0.1201	0.1328	39	42	0.369	0.0204	0.0204	0.0204	0.0243	0.0268		
2	2	0.358	0.0000	0.0000	0.0000	0.0000	40	43	0.370	0.0318	0.0318	0.0318	0.0378	0.0418		
3	3	0.375	0.0233	0.0233	0.0278	0.0307	41	44	0.369	0.0352	0.0352	0.0352	0.0419	0.0462		
4	4	0.358	0.0000	0.0000	0.0000	0.0000	42	45	0.359	0.0000	0.0000	0.0000	0.0000	0.0000		
5	5	0.375	0.0126	0.0126	0.0150	0.0165	43	46	0.374	0.0296	0.0296	0.0296	0.0353	0.0390		
6	6	0.375	0.0102	0.0102	0.0121	0.0134	44	47	0.371	0.0134	0.0134	0.0134	0.0160	0.0176		
7	7	0.374	0.0084	0.0084	0.0100	0.0110	45	48	0.370	0.0203	0.0203	0.0203	0.0256	0.0285		
8	8	0.359	0.0000	0.0000	0.0000	0.0000	46	50	0.371	0.0513	0.0513	0.0513	0.0610	0.0673		
9	9	0.372	0.0135	0.0135	0.0161	0.0177	47	51	0.371	0.0385	0.0385	0.0385	0.0458	0.0506		
10	10	0.372	0.0182	0.0182	0.0216	0.0239	48	53	0.371	0.0138	0.0138	0.0138	0.0165	0.0182		
11	11	0.359	0.0000	0.0000	0.0000	0.0000	49	55	0.371	0.0098	0.0098	0.0098	0.0117	0.0129		
12	12	0.371	0.0080	0.0080	0.0095	0.0105	50	57	0.371	0.0077	0.0077	0.0077	0.0091	0.0101		
13	13	0.370	0.0073	0.0073	0.0086	0.0095	51	59	0.370	0.0045	0.0045	0.0045	0.0054	0.0059		
14	14	0.359	0.0070	0.0070	0.0084	0.0092	52	60	0.374	0.0391	0.0391	0.0391	0.0466	0.0514		
15	15	0.369	0.0039	0.0039	0.0047	0.0052	53	61	0.373	0.0280	0.0280	0.0280	0.0334	0.0369		
16	16	0.369	0.0085	0.0085	0.0100	0.0111	54	63	0.373	0.0144	0.0144	0.0144	0.0171	0.0195		
17	17	0.371	0.0086	0.0086	0.0105	0.0116	55	68	0.372	0.0066	0.0066	0.0066	0.0078	0.0086		
18	18	0.370	0.0102	0.0102	0.0121	0.0132	56	65	0.375	0.0473	0.0473	0.0473	0.0563	0.0623		
19	19	0.371	0.0106	0.0106	0.0126	0.0139	57	70	0.375	0.0302	0.0302	0.0302	0.0359	0.0397		
20	20	0.369	0.0124	0.0124	0.0148	0.0163	58	72	0.359	0.0000	0.0000	0.0000	0.0000	0.0000		
21	21	0.369	0.0099	0.0099	0.0118	0.0130	59	73	0.369	0.0253	0.0253	0.0253	0.0301	0.0333		
22	22	0.370	0.0209	0.0209	0.0248	0.0274	60	74	0.369	0.0096	0.0096	0.0096	0.0115	0.0126		
23	23	0.359	0.0100	0.0100	0.0119	0.0131	61	75	0.369	0.0033	0.0033	0.0033	0.0043	0.0049		
24	24	0.370	0.0064	0.0064	0.0076	0.0084	62	76	0.369	0.0035	0.0035	0.0035	0.0042	0.0046		
25	25	0.370	0.0198	0.0198	0.0236	0.0260	63	77	0.373	0.0375	0.0375	0.0375	0.0446	0.0493		
26	26	0.369	0.0109	0.0109	0.0130	0.0143	64	78	0.372	0.0142	0.0142	0.0142	0.0169	0.0187		
27	27	0.369	0.0081	0.0081	0.0097	0.0107	65	79	0.372	0.0114	0.0114	0.0114	0.0135	0.0149		
28	28	0.369	0.0156	0.0156	0.0186	0.0205	66	80	0.372	0.0095	0.0095	0.0095	0.0113	0.0125		
29	29	0.369	0.0108	0.0108	0.0129	0.0142	67	81	0.376	0.0771	0.0771	0.0771	0.0918	0.1015		
30	30	0.369	0.0088	0.0088	0.0105	0.0116	68	82	0.375	0.0272	0.0272	0.0272	0.0324	0.0358		
31	31	0.369	0.0125	0.0125	0.0149	0.0164	69	83	0.375	0.0200	0.0200	0.0200	0.0238	0.0263		
32	32	0.369	0.0000	0.0000	0.0000	0.0000	70	84	0.375	0.0150	0.0150	0.0150	0.0179	0.0198		
33	33	0.368	0.0203	0.0203	0.0241	0.0267	71	85	0.375	0.0424	0.0424	0.0424	0.0505	0.0558		
34	34	0.369	0.0063	0.0063	0.0075	0.0083	72	86	0.376	0.0276	0.0276	0.0276	0.0329	0.0364		
35	35	0.368	0.0099	0.0099	0.0118	0.0130	73	87	0.378	0.0139	0.0139	0.0139	0.0165	0.0183		
36	36	0.369	0.0132	0.0132	0.0157	0.0173	74	88	0.383	0.0513	0.0513	0.0513	0.0612	0.0677		
37	37	0.371	0.0630	0.0630	0.0749	0.0827	75	89	0.385	0.0287	0.0287	0.0287	0.0343	0.0380		
38	38	0.371	0.0416	0.0416	0.0495	0.0546	76	90	0.385	0.0287	0.0287	0.0287	0.0343	0.0380		

ORIGINAL PAGE IS
OF POOR QUALITY

PRELIMINARY DATA									
TEST NO. 195									
RUN NO. 1									
AERONAUTICS AND SPACE ADMINISTRATION RESEARCH CENTER JOPLIN, FIELD CALIF.									
MACH 3.0 RESEARCH CENTER JOPLIN, FIELD CALIF. RS(METER)									
5.23 4.5243E 06 8.8945E 05 0.1917E 01 8.9000E 01 814.1 0.83812E 06 0.0018									
PACH	RE/FT	REL	LENGTH	TIME	TIME	TIME	TIME	TIME	TIME
5.23	1.3790E 06	8.8945E 05	0.1917E 01	8.9000E 01	814.1	0.83812E 06	0.0018		
1	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
2	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
3	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
4	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
5	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
6	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
7	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
8	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
9	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
10	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
11	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
12	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
13	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
14	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
15	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
16	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
17	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
18	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
19	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
20	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
21	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
22	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
23	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
24	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
25	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
26	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
27	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
28	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
29	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETT FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 195	
MACH		RE/METER	REL.	TIME (DEG K)	Q (W/CM2)	Q (BTU/FT2-SEC)	Q (W/CM2)	Q (BTU/FT2-SEC)	ST (0.500)	ST (0.850)	TIME (SEC)	RUN NO.		RS (METER)		
5.22		3.613E 06	7.1032E 05	584.6	26.855	3.23.663	74.495	65.640	1.849E-02	2.048E-02	0.158	2		0.0018		
MACH		RE/FT	REL.	TIME (DEG K)	Q (W/CM2)	Q (BTU/FT2-SEC)	Q (W/CM2)	Q (BTU/FT2-SEC)	ST (0.500)	ST (0.850)	TIME (SEC)	RS (FT)		RS (FT)		
5.22		1.1013E 06	7.1032E 05	584.6	26.855	3.23.663	74.495	65.640	1.849E-02	2.048E-02	0.158	364.88		0.0060		
CHAN	T/C	TIME (DEG K)	Q (W/CM2)	Q (BTU/FT2-SEC)	Q (W/CM2)	Q (BTU/FT2-SEC)	Q (W/CM2)	Q (BTU/FT2-SEC)	ST (0.500)	ST (0.850)	TIME (SEC)					
1	1	324.9	584.6	26.855	3.23.663	74.495	65.640	1.849E-02	2.048E-02	0.158						
2	2	324.2	583.6	19.424	17.115	74.595	65.728	1.335E-02	1.478E-02	0.333						
3	3	323.6	582.4	16.659	14.679	74.690	65.812	1.143E-02	1.263E-02	0.429						
4	4	323.1	579.8	10.820	9.534	74.902	65.999	7.404E-03	8.194E-03	0.421						
5	5	321.3	578.4	9.246	8.147	75.020	66.103	6.316E-03	6.588E-03	0.422						
6	6	320.1	576.3	7.141	6.292	75.198	66.260	4.865E-03	5.381E-03	0.429						
7	7	318.9	574.0	5.526	4.870	75.388	66.427	3.754E-03	4.151E-03	0.412						
8	8	317.4	571.3	4.089	3.603	75.605	66.619	2.768E-03	3.060E-03	0.421						
9	9	316.0	568.8	2.633	2.320	75.820	66.808	1.776E-03	1.962E-03	0.446						
10	10	315.0	567.0	2.005	1.768	75.969	66.939	1.349E-03	1.491E-03	0.416						
11	11	313.6	564.4	1.515	1.335	76.177	67.122	1.017E-03	1.123E-03	0.406						
12	12	312.1	561.8	1.108	0.976	76.395	67.314	7.413E-04	8.183E-04	0.367						
13	13	313.9	564.9	0.957	0.843	76.136	67.086	6.424E-04	7.096E-04	0.289						
14	14	310.3	558.5	0.626	0.552	76.671	67.574	4.170E-04	4.692E-04	0.386						
15	15	310.6	559.1	0.533	0.470	76.618	67.511	3.559E-04	3.924E-04	0.375						
16	16	312.3	562.2	0.556	0.490	76.363	67.287	3.723E-04	4.111E-04	0.329						
17	17	338.6	609.9	0.000	0.000	72.417	63.809	0.0000	0.0000	0.0000						
18	18	313.8	564.8	0.554	0.488	76.148	67.096	2.850E-04	3.146E-04	0.303						
19	19	310.9	559.6	0.427	0.376	76.576	67.474	2.850E-04	3.146E-04	0.368						
20	20	312.5	562.6	0.508	0.447	76.332	67.259	3.399E-04	3.753E-04	0.298						
21	21	310.8	559.5	0.772	0.680	76.588	67.485	5.145E-04	5.683E-04	0.503						
22	22	312.0	561.5	0.472	0.416	76.417	67.334	3.156E-04	3.485E-04	0.537						
23	23	312.6	562.7	0.380	0.335	76.317	67.246	2.546E-04	2.812E-04	0.324						
24	24	313.4	564.1	0.485	0.428	76.209	67.151	3.256E-04	3.596E-04	0.266						
25	25	314.0	565.2	0.559	0.493	76.113	67.066	3.756E-04	4.145E-04	0.302						
26	26	314.5	566.1	0.528	0.465	76.042	67.003	3.550E-04	3.922E-04	0.310						
27	27	314.6	566.3	0.526	0.463	76.025	66.988	3.540E-04	3.910E-04	0.328						
28	28	312.9	563.3	0.545	0.480	76.273	67.207	3.650E-04	4.030E-04	0.353						
29	29	311.1	560.0	4.242	3.738	76.542	67.444	2.832E-03	3.126E-03	0.240						
30	30	290.1	522.2	0.000	0.000	79.684	70.212	0.0000	0.0000	0.362						
31	31	312.1	561.8	4.597	4.051	76.359	67.318	3.075E-03	3.395E-03	0.282						
32	32	312.7	562.8	0.943	0.831	76.315	67.244	6.314E-04	6.972E-04	0.423						
33	33	313.4	564.2	0.296	0.260	76.199	67.141	1.983E-04	2.190E-04	0.331						
34	34	311.5	560.6	3.093	2.728	76.454	67.402	2.066E-03	2.281E-03	0.456						
35	35	311.5	560.7	2.248	1.981	76.489	67.397	1.502E-03	1.658E-03	0.416						
36	36	312.2	562.0	3.420	3.014	76.377	67.298	2.288E-03	2.527E-03	0.418						
37	37	312.6	562.7	2.521	2.221	76.321	67.249	1.686E-03	1.864E-03	0.579						
38	38	313.5	563.8	0.859	0.757	76.228	67.167	5.763E-04	6.265E-04	0.410						
39	39	313.0	565.2	0.266	0.234	76.116	67.069	1.787E-04	1.974E-04	0.224						
40	40	311.5	560.7	1.718	1.511	76.586	67.395	1.147E-03	1.267E-03	0.422						

42	57	310.2	560.3	1.261	1.111	60.014	67.250	8.211E-04	1.1826E-03	2.3054E-03	0.480
43	58	311.5	561.4	1.271	1.560	66.518	67.123	8.211E-04	1.1826E-03	2.3054E-03	0.278
44	59	312.3	562.2	3.206	1.825	76.428	67.343	8.211E-04	1.1826E-03	2.3054E-03	0.391
45	60	310.8	559.8	1.561	1.375	76.362	67.285	8.211E-04	1.0448E-03	1.1535E-03	0.384
46	61	311.0	559.8	1.030	0.932	76.587	67.484	8.211E-04	7.0601E-04	7.7923E-04	0.364
47	62	311.3	560.4	1.257	0.907	76.560	67.460	8.211E-04	6.8716E-04	7.5846E-04	0.372
48	63	311.8	561.2	2.365	1.108	76.515	67.420	8.211E-04	8.3978E-04	9.2658E-04	0.377
49	64	312.4	562.2	2.084	2.084	76.446	67.359	8.211E-04	1.5811E-03	1.7454E-03	0.461
50	65	313.0	563.4	1.944	1.713	76.360	67.284	8.211E-04	1.3012E-03	1.4367E-03	0.384
51	66	313.5	564.3	0.846	0.745	76.262	67.197	8.211E-04	5.0715E-04	6.2629E-04	0.245
52	67	313.9	565.0	0.240	0.212	76.151	67.135	8.211E-04	1.6129E-04	1.7812E-04	0.196
53	68	312.6	562.6	0.239	0.264	76.131	67.081	8.211E-04	2.0115E-04	2.2217E-04	0.373
54	69	311.1	560.1	0.436	0.384	76.316	67.245	8.211E-04	2.9174E-04	3.2213E-04	0.335
55	70	310.3	559.5	1.176	1.038	76.588	67.485	8.211E-04	7.8572E-04	8.6721E-04	0.358
56	71	311.1	560.6	1.054	0.933	76.500	67.407	8.211E-04	7.0712E-04	7.8057E-04	0.388
57	72	311.5	560.9	1.560	1.374	76.468	67.379	8.211E-04	1.0424E-03	1.1507E-03	0.523
58	73	312.2	562.0	1.938	1.708	76.382	67.303	8.211E-04	1.2970E-03	1.4320E-03	0.340
59	74	311.1	560.1	1.119	0.986	76.539	67.442	8.211E-04	7.4742E-04	8.2508E-04	0.323
60	75	311.7	561.0	0.951	0.873	76.462	67.373	8.211E-04	6.6253E-04	7.3139E-04	0.360
61	76	311.6	561.3	1.291	1.137	76.440	67.354	8.211E-04	8.6298E-04	9.5270E-04	1.294
62	77	311.5	560.6	0.000	1.000	72.435	63.825	8.211E-04	0.0000	0.0000	0.354
63	78	311.5	560.9	1.038	0.915	76.494	67.402	8.211E-04	6.9361E-04	7.6566E-04	0.294
64	79	311.6	560.6	0.941	0.829	76.469	67.379	8.211E-04	6.2911E-04	6.5449E-04	0.357
65	80	311.5	560.6	0.563	0.848	76.454	67.402	8.211E-04	6.4324E-04	7.1006E-04	0.322
66	81	311.2	560.1	1.044	0.919	76.538	67.440	8.211E-04	6.9671E-04	7.6503E-04	0.334
67	82	311.9	561.4	0.869	0.854	76.432	67.347	8.211E-04	6.4792E-04	7.1529E-04	0.428
68	83	311.6	560.6	0.845	0.745	76.472	67.382	8.211E-04	5.6483E-04	6.2352E-04	0.299
69	84	312.5	562.5	1.614	1.422	76.337	67.263	8.211E-04	1.0610E-03	1.1936E-03	0.296
70	85	311.8	560.7	1.127	0.993	76.485	67.394	8.211E-04	7.5328E-04	8.3154E-04	0.355
71	86	311.8	561.2	0.994	0.876	76.444	67.358	8.211E-04	6.6464E-04	7.13374E-04	0.293
72	87	311.4	561.2	0.753	0.663	76.447	67.360	8.211E-04	5.0314E-04	5.5545E-04	0.335
73	88	311.4	560.6	1.039	0.914	76.497	67.404	8.211E-04	6.9403E-04	7.6612E-04	0.293
74	89	311.6	561.3	1.004	0.884	76.440	67.354	8.211E-04	6.7106E-04	7.4083E-04	0.374
75	90	312.3	562.1	0.000	0.000	72.425	63.816	8.211E-04	0.0000	0.0000	0.299
76	91	312.3	562.1	0.000	0.000	76.373	67.295	8.211E-04	9.0444E-04	9.5858E-04	0.335

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.1144E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER, HUFFETT FIELD, CALIF. PRELIMINARY DATA															TEST NO. 195	
104															RUN NO. 3	
104															ET VATED	
104															a = 30° B = 40°	
104															0.0060	
104															0.0060	
104															0.0060	
104															0.0060	
104															0.0060	
104															0.0060	
104															0.0060	
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

WACH RE/METER REL LENGTH(METER) PT(ATM) TT(DEG K) HT(JOULE/KG) RS(METER) TEST NO. 195
5.22 3.583E 06 6.8776E 05 0.197 6.87 815.2 0.8393E 06 0.0018 RUN NO. 3
WACH PE/FT REL LENGTH(FT) PT(PSI) TT(DEG R) HT(FTU/LBM) RS(FT) 0.0060

CH	T/C	TH(DEG K)	TH(DEG R)	Q(W/CM2)	Q(HTU/FT2-SEC)	Q(SW/CM2)	Q(SHT/FT2-SEC)	ST(C.900)	ST(C.850)	TIME(SEC)
1	1	328.6	591.4	22.575	19.892	70.855	62.433	1.6670E-02	1.8454E-02	0.267
2	2	327.7	585.8	11.647	9.734	70.981	62.544	8.1407E-03	5.0257E-03	0.515
3	3	326.9	588.5	6.701	5.905	71.091	62.640	4.9295E-03	5.4668E-03	0.582
4	4	325.1	585.3	2.207	1.945	71.351	62.870	1.6188E-03	1.7922E-03	0.500
5	5	324.1	583.3	1.660	1.463	71.508	63.008	1.2129E-03	1.3441E-03	0.463
6	6	322.4	580.3	1.061	0.935	71.748	63.219	7.7219E-04	8.5537E-04	0.425
7	7	320.7	577.2	0.802	0.707	71.957	63.439	5.8127E-04	6.4361E-04	0.371
8	8	318.5	573.3	0.648	0.571	72.314	63.718	4.6719E-04	5.1702E-04	0.337
9	9	316.5	569.6	0.525	0.462	72.613	63.981	3.7674E-04	4.1671E-04	0.338
10	10	315.0	567.0	0.463	0.408	72.828	64.172	3.3143E-04	3.6646E-04	0.316
11	11	313.1	563.5	0.298	0.262	73.103	64.414	2.1218E-04	2.3450E-04	0.378
12	12	311.2	560.1	0.233	0.206	73.380	64.672	1.6549E-04	1.8282E-04	0.216
13	13	315.4	567.7	0.595	0.876	72.770	64.121	7.1231E-04	7.8767E-04	0.307
14	14	308.3	554.9	0.251	0.221	73.802	65.030	1.7681E-04	1.9518E-04	0.221
15	15	308.4	555.1	0.352	0.310	73.786	65.015	2.4807E-04	2.7386E-04	0.245
16	16	311.7	561.0	0.235	0.207	73.306	64.592	1.6683E-04	1.8432E-04	0.334
17	17	308.8	609.9	0.000	0.000	69.366	61.120	0.0000	0.0000	0.184
18	18	318.6	566.3	0.708	0.623	72.877	64.215	5.0584E-04	5.5925E-04	0.342
19	19	308.7	555.6	0.472	0.415	73.744	64.578	3.3258E-04	3.6718E-04	0.361
20	20	311.9	561.4	0.329	0.290	73.273	64.563	2.3353E-04	2.5802E-04	0.389
21	21	319.5	555.3	0.654	0.577	73.773	65.004	4.6133E-04	5.0930E-04	0.370
22	22	315.5	558.9	0.646	0.570	73.475	64.742	4.5777E-04	5.0562E-04	0.398
23	23	312.0	561.5	0.454	0.400	73.266	64.558	3.2284E-04	3.5670E-04	0.403
24	24	313.5	564.3	0.264	0.233	73.343	64.361	1.8848E-04	2.0833E-04	0.347
25	25	314.2	566.7	0.687	0.605	72.849	64.190	4.9124E-04	5.4314E-04	0.325
26	26	316.4	569.4	1.516	1.336	72.627	63.595	1.0880E-03	1.2034E-03	0.355
27	27	317.1	570.8	2.545	2.242	72.518	63.898	1.8256E-03	2.0240E-03	0.362
28	28	314.6	566.3	4.646	4.094	72.879	64.216	3.3214E-03	3.6722E-03	0.384
29	29	302.7	555.7	0.858	0.756	73.737	64.572	6.0551E-04	6.6851E-04	0.269
30	30	293.8	528.5	0.000	0.000	75.907	66.885	0.0000	0.0000	0.229
31	31	310.5	558.9	0.776	0.684	73.481	64.747	5.4935E-04	6.0676E-04	0.430
32	32	311.9	561.5	0.485	0.427	73.272	64.563	3.4441E-04	3.8053E-04	0.416
33	33	313.5	564.3	0.292	0.257	73.640	64.358	2.0758E-04	2.2588E-04	0.252
34	34	309.2	556.5	0.741	0.653	73.669	64.913	5.2292E-04	5.7738E-04	0.304
35	35	309.3	556.7	0.669	0.589	73.658	64.502	4.7221E-04	5.2141E-04	0.347
36	36	310.6	559.2	0.681	0.600	73.458	64.727	4.8212E-04	5.3252E-04	0.428
37	37	311.9	561.4	0.681	0.378	73.281	64.570	3.0481E-04	3.3678E-04	0.393
38	38	313.3	564.6	0.429	0.262	73.069	64.384	2.1182E-04	2.3411E-04	0.138
39	39	315.0	567.0	0.590	0.520	72.821	64.165	4.2247E-04	4.6713E-04	0.304
40	40	309.2	556.5	0.546	0.491	73.664	64.908	3.8583E-04	4.2603E-04	0.363
41	41	307.9	554.3	0.449	0.396	73.850	65.072	3.1606E-04	3.4898E-04	0.421

42	305.8	560.6	0.316	0.409	73.564	64.837	3.2823E-04	1.6247E-04	0.507
43	311.2	560.2	0.316	0.278	73.377	64.655	2.2405E-04	2.4751E-04	0.411
44	312.4	562.4	0.250	0.220	73.197	64.497	1.7744E-04	1.719819E-04	0.276
45	308.6	555.6	0.384	0.338	73.748	64.982	2.7044E-04	2.9868E-04	0.351
46	309.0	556.2	0.356	0.314	73.659	64.939	2.5154E-04	2.7773E-04	0.380
47	309.9	557.8	0.350	0.309	73.569	64.824	2.4768E-04	2.7362E-04	0.286
48	311.1	560.0	0.283	0.250	73.387	64.664	2.0089E-04	2.2192E-04	0.431
49	312.5	562.5	0.243	0.214	73.189	64.489	1.7307E-04	1.9125E-04	0.320
50	314.0	565.3	0.620	0.547	72.964	64.291	4.4298E-04	4.8968E-04	0.330
51	315.6	568.0	1.593	1.404	72.741	64.095	1.4122E-03	1.2620E-03	0.358
52	316.9	570.4	2.814	2.480	72.551	63.927	2.0222E-03	2.2370E-03	0.361
53	315.4	567.6	4.677	4.121	72.773	64.123	3.3453E-03	3.7036E-03	0.375
54	308.9	556.0	0.346	0.305	73.710	64.549	2.4430E-04	2.6973E-04	0.336
55	310.2	558.4	0.347	0.306	73.517	64.779	2.4587E-04	2.7155E-04	0.370
56	311.1	559.9	0.276	0.244	73.355	64.671	1.9599E-04	2.1650E-04	0.388
57	312.4	562.3	0.240	0.212	73.204	64.503	1.7091E-04	1.8885E-04	0.337
58	309.4	557.0	0.348	0.307	73.634	64.881	2.4611E-04	2.7177E-04	0.206
59	310.7	558.2	0.374	0.330	73.457	64.725	2.6527E-04	2.9300E-04	0.254
60	311.5	560.6	0.300	0.264	73.339	64.622	2.1305E-04	2.3537E-04	0.412
61	338.7	609.7	0.000	0.000	69.382	61.135	0.0000	0.0000	1.069
62	309.9	557.8	0.399	0.352	73.565	64.821	2.8226E-04	3.1172E-04	0.250
63	310.9	559.6	0.461	0.406	73.421	64.694	3.2606E-04	3.6076E-04	0.208
64	311.3	560.3	0.250	0.221	73.363	64.643	1.7767E-04	1.9628E-04	0.331
65	310.1	558.1	1.282	1.130	73.543	64.802	5.0714E-04	1.0018E-03	0.455
66	311.6	560.9	0.224	0.814	73.321	64.605	6.5576E-04	7.2448E-04	0.327
67	312.0	561.5	0.291	0.257	73.266	64.557	2.0688E-04	2.2858E-04	0.379
68	313.9	565.1	0.029	0.554	72.977	64.303	4.4862E-04	4.9551E-04	0.374
69	310.6	559.1	1.573	1.738	73.464	64.732	1.3974E-03	1.5435E-03	0.360
70	311.9	561.5	1.589	1.400	73.272	64.563	1.1291E-03	1.2475E-03	0.310
71	312.5	562.6	0.436	0.384	73.182	64.484	3.1037E-04	3.4257E-04	0.421
72	310.9	559.6	2.607	2.297	73.420	64.693	1.8683E-03	2.0416E-03	0.440
73	312.3	562.1	2.859	2.555	73.222	64.519	2.0615E-03	2.2779E-03	0.383
74	339.8	605.5	0.000	0.000	65.368	61.123	0.0000	0.0000	0.440
75	313.8	564.8	0.557	0.451	72.959	64.322	3.9760E-04	4.3949E-04	0.409

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0276E-01 (SLUGS/FT²-SEC)

ORIGINAL PAGE IS
OF POOR QUALITY

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION APES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TES. NO. 195
RLN NO. 4
ET MATED
α = 60°, β = 0°

WACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG °)	MT(JOULE/KG)	RS(METER)	W/HS(1.000)	H/HS(C.500)	H/HS(0.050)	CHAN	T/C	Hm/HT	Q/US	H/HS(1.000)	H/HS(C.900)	H/HS(C.850)
5.22	3.182DE 06	6.2567E 05	0.197	6.75	858.6	0.8870E 00	0.0018	0.0060	0.0060	0.0060	39	51	0.365	0.0145	0.0145	0.0172	0.0190
5.22	5.7503E 05	6.2507E 05	0.645	99.88	15.5.6	361.47	0.0060	0.0060	0.0060	0.0060	40	54	0.360	0.0107	0.0107	0.0127	0.0140
1	C.377	0.1839	0.2191	0.2422	0.0942	0.0111	0.0111	0.0111	0.0111	0.0111	41	55	0.359	0.0111	0.0111	0.0132	0.0145
2	C.378	0.0716	0.0952	0.0472	0.0154	0.0116	0.0116	0.0116	0.0116	0.0116	42	56	0.361	0.0116	0.0116	0.0138	0.0152
3	C.375	0.0359	0.0147	0.0154	0.0146	0.0092	0.0092	0.0092	0.0092	0.0092	43	57	0.362	0.0092	0.0092	0.0109	0.0120
4	C.374	0.0117	0.0132	0.0116	0.0116	0.0065	0.0065	0.0065	0.0065	0.0065	44	58	0.363	0.0065	0.0065	0.0077	0.0085
5	C.374	0.0111	0.0105	0.0116	0.0104	0.0116	0.0116	0.0116	0.0116	0.0116	45	60	0.360	0.0116	0.0116	0.0137	0.0151
6	C.372	0.0089	0.0094	0.0094	0.0094	0.0104	0.0104	0.0104	0.0104	0.0104	46	61	0.360	0.0121	0.0121	0.0143	0.0158
7	C.371	0.0079	0.0087	0.0087	0.0087	0.0104	0.0104	0.0104	0.0104	0.0104	47	62	0.361	0.0104	0.0104	0.0123	0.0138
8	C.375	0.0073	0.0081	0.0081	0.0081	0.0104	0.0104	0.0104	0.0104	0.0104	48	63	0.362	0.0110	0.0110	0.0130	0.0144
9	C.368	0.0069	0.0074	0.0074	0.0074	0.0104	0.0104	0.0104	0.0104	0.0104	49	64	0.363	0.0077	0.0077	0.0092	0.0101
10	C.368	0.0074	0.0084	0.0084	0.0084	0.0124	0.0124	0.0124	0.0124	0.0124	50	65	0.364	0.0156	0.0156	0.0185	0.0204
11	C.365	0.0094	0.0112	0.0124	0.0138	0.0138	0.0138	0.0138	0.0138	0.0138	51	66	0.365	0.0096	0.0096	0.0071	0.0085
12	C.363	0.0105	0.0125	0.0138	0.0138	0.0138	0.0138	0.0138	0.0138	0.0138	52	67	0.366	0.0073	0.0073	0.0092	0.0101
13	C.364	0.0147	0.0174	0.0192	0.0208	0.0208	0.0208	0.0208	0.0208	0.0208	53	68	0.365	0.0181	0.0181	0.0206	0.0227
14	C.363	0.0064	0.0075	0.0082	0.0082	0.0082	0.0082	0.0082	0.0082	0.0082	54	70	0.360	0.0174	0.0174	0.0206	0.0227
15	C.359	0.0040	0.0047	0.0052	0.0052	0.0052	0.0052	0.0052	0.0052	0.0052	55	71	0.361	0.0273	0.0273	0.0324	0.0357
16	C.363	0.0046	0.0054	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	56	72	0.362	0.0136	0.0136	0.0162	0.0174
17	C.364	0.0033	0.0040	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	57	73	0.363	0.0106	0.0106	0.0126	0.0139
18	C.365	0.0149	0.0173	0.0191	0.0191	0.0191	0.0191	0.0191	0.0191	0.0191	58	77	0.360	0.0303	0.0303	0.0360	0.0396
19	C.359	0.0035	0.0042	0.0046	0.0046	0.0046	0.0046	0.0046	0.0046	0.0046	59	78	0.362	0.0438	0.0438	0.0515	0.0573
20	C.363	0.0055	0.0065	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	0.0072	60	79	0.362	0.0191	0.0191	0.0227	0.0250
21	C.363	0.0033	0.0039	0.0043	0.0043	0.0043	0.0043	0.0043	0.0043	0.0043	61	81	0.364	0.0152	0.0152	0.0181	0.0199
22	C.359	0.0030	0.0036	0.0043	0.0048	0.0048	0.0048	0.0048	0.0048	0.0048	62	84	0.361	0.0435	0.0435	0.0516	0.0569
23	C.363	0.0062	0.0074	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	63	85	0.362	0.0633	0.0633	0.0751	0.0828
24	C.364	0.0042	0.0050	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	64	86	0.362	0.0301	0.0301	0.0357	0.0393
25	C.365	0.0150	0.0178	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	65	90	0.361	0.0607	0.0607	0.0720	0.0793
26	C.365	0.0150	0.0178	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	0.0196	66	91	0.363	0.0478	0.0478	0.0561	0.0618
27	C.366	0.0115	0.0119	0.0124	0.0124	0.0124	0.0124	0.0124	0.0124	0.0124	67	92	0.363	0.0473	0.0473	0.0561	0.0618
28	C.364	0.0134	0.0144	0.0155	0.0160	0.0160	0.0160	0.0160	0.0160	0.0160	68	94	0.364	0.0258	0.0258	0.0306	0.0338
29	C.359	0.0044	0.0052	0.0057	0.0057	0.0057	0.0057	0.0057	0.0057	0.0057	69	98	0.361	0.0747	0.0747	0.0886	0.0977
30	C.362	0.0067	0.0082	0.0098	0.0098	0.0098	0.0098	0.0098	0.0098	0.0098	70	99	0.363	0.1277	0.1277	0.1515	0.1671
31	C.361	0.0053	0.0063	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	71	100	0.364	0.0855	0.0855	0.1014	0.1118
32	C.363	0.0058	0.0069	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	72	103	0.362	0.0752	0.0752	0.0892	0.0983
33	C.364	0.0047	0.0056	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	73	104	0.364	0.1214	0.1214	0.1441	0.1589
34	C.360	0.0084	0.0100	0.0110	0.0110	0.0110	0.0110	0.0110	0.0110	0.0110	74	105	0.364	0.1228	0.1228	0.1457	0.1607
35	C.360	0.0099	0.0117	0.0129	0.0129	0.0129	0.0129	0.0129	0.0129	0.0129	75	107	0.365	0.0470	0.0470	0.0558	0.0616
36	C.362	0.0077	0.0091	0.0101	0.0101	0.0101	0.0101	0.0101	0.0101	0.0101							
37	C.363	0.0084	0.0099	0.0105	0.0105	0.0105	0.0105	0.0105	0.0105	0.0105							
38	C.364	0.0062	0.0074	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOPETT FIELD CALIF. *** PRELIMINARY DATA ***									
MACH		REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(180U/LBM)	RS(FT)		RUN NO.	4
5.22	3.1825E 06	6.2567E 05	0.197	6.75	858.6	0.88710E 06	0.0018		
5.22	5.7603E 05	6.2567E 05	0.65	99.88	1545.6	381.47	0.0060		
CHAN	T/C	T(180U/LBM)	Q(180U/LBM)	Q(180U/LBM)	Q(180U/LBM)	Q(180U/LBM)	Q(180U/LBM)	Q(180U/LBM)	Q(180U/LBM)
1	2	3	4	5	6	7	8	9	10
1	332.9	599.2	14.101	12.425	76.668	67.555	9.9713E-03	1.1025E-02	0.484
2	332.0	597.7	5.494	4.841	76.752	67.664	3.8783E-03	4.2873E-03	0.758
3	331.3	596.4	2.757	2.429	76.895	67.755	1.9429E-03	2.1475E-03	0.809
4	330.5	594.8	0.903	0.796	77.022	67.917	6.0274E-04	7.0208E-04	0.331
5	330.1	594.1	0.858	0.756	77.079	68.066	4.7960E-04	5.2981E-04	0.396
6	329.9	592.0	0.684	0.603	77.248	68.236	4.7524E-04	5.2981E-04	0.279
7	327.6	589.6	0.613	0.540	77.441	68.386	3.9457E-04	4.3563E-04	0.275
8	326.4	587.5	0.566	0.499	77.612	68.594	3.7102E-04	4.0949E-04	0.321
9	324.8	584.6	0.534	0.470	77.847	68.737	4.0126E-04	4.2758E-04	0.398
10	323.7	582.6	0.519	0.510	78.010	68.934	5.1016E-04	5.6273E-04	0.465
11	322.1	579.8	0.738	0.651	78.233	69.162	5.6820E-04	6.2649E-04	0.476
12	320.3	576.6	0.825	0.727	78.492	68.994	7.9350E-04	8.7516E-04	0.374
13	321.7	579.0	1.149	1.013	78.301	68.902	3.4390E-04	3.7890E-04	0.487
14	316.9	570.4	0.503	0.443	78.951	69.608	2.1553E-04	2.3741E-04	0.493
15	316.9	570.3	0.315	0.278	78.999	69.171	2.5678E-04	2.7209E-04	0.378
16	320.3	576.5	0.359	0.316	78.503	68.007	1.8033E-04	1.9889E-04	0.490
17	321.5	578.8	0.261	0.230	78.316	68.951	7.9933E-04	8.7063E-04	0.436
18	322.0	579.6	0.143	0.107	78.253	69.577	1.8916E-04	2.0842E-04	0.451
19	317.1	570.8	0.277	0.244	78.963	69.164	2.9650E-04	3.2737E-04	0.353
20	320.3	576.6	0.431	0.380	78.495	69.568	1.7815E-04	1.9629E-04	0.472
21	317.2	570.9	0.261	0.230	78.953	69.336	1.9659E-04	2.1670E-04	0.464
22	319.0	574.2	0.286	0.252	78.650	69.178	3.3515E-04	3.6953E-04	0.460
23	320.2	576.4	0.487	0.429	78.510	69.059	2.2863E-04	2.5213E-04	0.526
24	321.1	578.1	0.332	0.292	78.375	68.932	8.0869E-04	8.9201E-04	0.439
25	322.1	579.8	1.170	1.031	78.230	68.858	2.1545E-03	2.3768E-03	0.427
26	322.7	580.9	3.114	2.744	78.147	68.799	3.8844E-03	4.2900E-03	0.425
27	323.2	581.7	5.614	4.947	78.080	68.980	7.2672E-03	8.0154E-03	0.533
28	321.8	579.2	10.525	9.274	78.285	69.533	2.6034E-04	2.8395E-04	0.395
29	317.4	571.4	0.345	0.304	78.913	69.533	3.6262E-04	3.9550E-04	0.466
30	317.7	571.8	0.530	0.467	78.879	69.503	3.6253E-04	3.9550E-04	0.389
31	319.2	574.5	0.415	0.366	78.662	69.312	2.8509E-04	3.1269E-04	0.527
32	320.5	576.9	0.454	0.400	78.472	69.145	2.5508E-04	2.8130E-04	0.528
33	321.2	578.1	0.370	0.326	78.369	69.054	4.5824E-04	5.0957E-04	0.474
34	317.7	571.9	0.663	0.585	78.874	69.498	5.3414E-04	5.8964E-04	0.440
35	317.9	572.2	0.780	0.687	78.846	69.474	5.3414E-04	5.8964E-04	0.386
36	319.4	575.0	0.606	0.534	78.622	69.277	4.1613E-04	4.5873E-04	0.448
37	320.4	576.8	0.656	0.578	78.476	69.148	4.5142E-04	4.9775E-04	0.507
38	321.3	578.3	0.487	0.429	78.259	69.045	3.3578E-04	3.7031E-04	0.437
39	322.2	580.0	1.146	1.001	78.220	68.923	7.8499E-04	8.6578E-04	0.463
40	318.2	572.7	0.843	0.733	78.809	69.441	5.7763E-04	6.3650E-04	0.456
41	317.3	571.2	0.877	0.773	78.929	69.548	6.0022E-04	6.6138E-04	0.456

42	50	319.0	514.2	0.919	0.807	69.650	69.337	6.2684E-04	6.5315E-04	C.430
43	51	320.1	516.2	0.921	0.807	69.650	69.337	6.2684E-04	6.5315E-04	C.430
44	52	320.8	517.4	0.912	0.851	69.650	69.104	6.2684E-04	6.5315E-04	C.430
45	53	317.7	511.8	0.913	0.805	69.650	69.506	6.2684E-04	6.5315E-04	C.430
46	54	317.9	512.1	0.952	0.839	69.650	69.480	6.2684E-04	6.5315E-04	C.430
47	55	318.8	513.9	1.545	1.361	69.650	69.355	6.2684E-04	6.5315E-04	C.430
48	56	319.6	515.6	0.863	0.761	69.650	69.233	6.2684E-04	6.5315E-04	C.430
49	57	320.6	517.2	0.606	0.534	69.650	69.123	6.2684E-04	6.5315E-04	C.430
50	58	321.5	518.7	1.220	1.075	69.650	69.015	6.2684E-04	6.5315E-04	C.430
51	59	322.4	520.3	3.100	2.731	69.650	68.901	6.2684E-04	6.5315E-04	C.430
52	60	323.2	521.7	5.488	4.836	69.650	68.801	6.2684E-04	6.5315E-04	C.430
53	61	322.3	520.2	9.236	8.138	69.650	68.907	6.2684E-04	6.5315E-04	C.430
54	62	317.9	512.3	1.371	1.208	69.650	69.470	6.2684E-04	6.5315E-04	C.430
55	63	319.2	514.5	2.147	1.892	69.650	69.309	6.2684E-04	6.5315E-04	C.430
56	64	319.8	515.7	1.072	0.945	69.650	69.228	6.2684E-04	6.5315E-04	C.430
57	65	320.9	517.7	0.835	0.736	69.650	69.087	6.2684E-04	6.5315E-04	C.430
58	66	319.1	512.5	2.391	2.107	69.650	69.454	6.2684E-04	6.5315E-04	C.430
59	67	319.5	515.0	3.444	3.035	69.650	69.275	6.2684E-04	6.5315E-04	C.430
60	68	320.1	516.1	1.503	1.325	69.650	69.199	6.2684E-04	6.5315E-04	C.430
61	69	321.3	518.3	1.192	1.051	69.650	69.039	6.2684E-04	6.5315E-04	C.430
62	70	318.6	513.5	3.427	3.020	69.650	69.384	6.2684E-04	6.5315E-04	C.430
63	71	319.7	515.5	4.974	4.383	69.650	69.238	6.2684E-04	6.5315E-04	C.430
64	72	319.9	515.8	2.362	2.082	69.650	69.219	6.2684E-04	6.5315E-04	C.430
65	73	318.8	513.9	4.778	4.210	69.650	69.357	6.2684E-04	6.5315E-04	C.430
66	74	320.3	516.5	6.888	6.069	69.650	69.168	6.2684E-04	6.5315E-04	C.430
67	75	320.7	517.3	3.708	3.267	69.650	69.110	6.2684E-04	6.5315E-04	C.430
68	76	321.9	519.4	2.021	1.781	69.650	68.965	6.2684E-04	6.5315E-04	C.430
69	77	319.2	514.6	5.877	5.179	69.650	69.308	6.2684E-04	6.5315E-04	C.430
70	78	320.7	517.3	10.017	8.826	69.650	69.111	6.2684E-04	6.5315E-04	C.430
71	79	321.2	518.1	6.699	5.902	69.650	69.053	6.2684E-04	6.5315E-04	C.430
72	80	319.7	515.5	5.912	5.209	69.650	69.244	6.2684E-04	6.5315E-04	C.430
73	81	321.4	518.4	5.513	4.832	69.650	69.032	6.2684E-04	6.5315E-04	C.430
74	82	321.5	518.6	9.618	8.475	69.650	69.019	6.2684E-04	6.5315E-04	C.430
75	83	322.5	520.6	3.677	3.240	69.650	68.881	6.2684E-04	6.5315E-04	C.430

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9438E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MURFET FIELD CALIF.											TEST NO. 195	
RE/METER PEL LENGTH(METER) PT(ATM) TT(DEG K) HT(JOULE/KG) RS(METER)											RUN NO. 5	
WACH	5.22	1.6221E 06	6.7277E 05	0.197	6.88	827.5	0.85277E 06	0.0018	ORB MATED			
WACH	5.22	1.6431E 06	6.7277E 05	0.645	101.17	1489.5	366.71	0.0360	$\alpha = 60^\circ, \beta = 0^\circ$			
T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	0.266	0.0071	0.0071	0.0085	0.0094	39	42	0.360	0.0020	0.0023	0.0026	0.0028
2	0.266	0.0069	0.0069	0.0082	0.0090	40	43	0.362	0.0068	0.0068	0.0068	0.0089
3	0.367	0.0058	0.0058	0.0081	0.0090	41	44	0.360	0.0068	0.0068	0.0068	0.0089
4	0.367	0.0057	0.0057	0.0080	0.0098	42	45	0.364	0.0076	0.0076	0.0076	0.0100
5	0.367	0.0072	0.0072	0.0085	0.0094	43	46	0.364	0.0119	0.0119	0.0119	0.0155
6	0.266	0.0076	0.0076	0.0090	0.0100	44	47	0.351	0.0000	0.0000	0.0000	0.0000
7	0.266	0.0085	0.0085	0.0100	0.0111	45	48	0.360	0.0092	0.0092	0.0092	0.0120
8	0.265	0.0093	0.0093	0.0110	0.0121	46	50	0.362	0.1852	0.1852	0.1852	0.2421
9	0.264	0.0112	0.0112	0.0133	0.0146	47	51	0.363	0.1814	0.1814	0.1814	0.2372
10	0.264	0.0136	0.0136	0.0161	0.0178	48	53	0.363	0.1323	0.1323	0.1323	0.1731
11	0.263	0.0223	0.0223	0.0277	0.0305	49	55	0.363	0.1117	0.1117	0.1117	0.1461
12	0.262	0.0358	0.0358	0.0424	0.0468	50	57	0.363	0.0873	0.0873	0.0873	0.1142
13	0.262	0.0788	0.0788	0.0935	0.1031	51	59	0.363	0.0681	0.0681	0.0681	0.0891
14	0.261	0.1583	0.1583	0.1877	0.2070	52	60	0.365	0.1534	0.1534	0.1534	0.2008
15	0.262	0.0410	0.0410	0.0486	0.0536	53	61	0.365	0.1616	0.1616	0.1616	0.2116
16	0.261	0.0182	0.0182	0.0216	0.0238	54	65	0.366	0.1260	0.1260	0.1260	0.1650
17	0.261	0.0296	0.0296	0.0351	0.0387	55	68	0.367	0.0836	0.0836	0.0836	0.1095
18	0.262	0.0439	0.0439	0.0521	0.0574	56	69	0.368	0.2078	0.2078	0.2078	0.2724
19	0.263	0.0792	0.0792	0.0940	0.1036	57	70	0.369	0.1706	0.1706	0.1706	0.2238
20	0.262	0.0989	0.0989	0.1173	0.1293	58	72	0.369	0.1299	0.1299	0.1299	0.1704
21	0.261	0.0181	0.0181	0.0215	0.0236	59	73	0.360	0.0016	0.0016	0.0016	0.0021
22	0.261	0.0180	0.0180	0.0214	0.0236	60	74	0.361	0.0017	0.0017	0.0017	0.0022
23	0.261	0.0000	0.0000	0.0000	0.0000	61	75	0.360	0.0031	0.0031	0.0031	0.0041
24	0.261	0.0142	0.0142	0.0168	0.0185	62	76	0.361	0.0031	0.0031	0.0031	0.0041
25	0.260	0.0260	0.0260	0.0308	0.0340	63	77	0.364	0.0038	0.0038	0.0038	0.0045
26	0.261	0.0046	0.0046	0.0055	0.0060	64	78	0.364	0.0027	0.0027	0.0027	0.0035
27	0.261	0.0111	0.0111	0.0131	0.0145	65	79	0.365	0.0062	0.0062	0.0062	0.0081
28	0.261	0.0315	0.0315	0.0373	0.0411	66	80	0.365	0.0028	0.0028	0.0028	0.0037
29	0.261	0.0047	0.0047	0.0056	0.0061	67	81	0.368	0.0499	0.0499	0.0499	0.0654
30	0.261	0.0268	0.0268	0.0318	0.0350	68	82	0.368	0.0101	0.0101	0.0101	0.0133
31	0.260	0.0059	0.0059	0.0070	0.0077	69	83	0.369	0.0036	0.0036	0.0036	0.0048
32	0.260	0.0035	0.0035	0.0041	0.0045	70	84	0.369	0.0043	0.0043	0.0043	0.0056
33	0.259	0.0016	0.0016	0.0019	0.0021	71	85	0.366	0.0062	0.0062	0.0062	0.0081
34	0.259	0.0000	0.0000	0.0000	0.0000	72	86	0.369	0.0096	0.0096	0.0096	0.0126
35	0.260	0.0029	0.0029	0.0035	0.0038	73	87	0.371	0.0128	0.0128	0.0128	0.0168
36	0.260	0.0028	0.0028	0.0033	0.0036	74	88	0.376	0.0173	0.0173	0.0173	0.0228
37	0.262	0.0082	0.0082	0.0097	0.0107	75	89	0.380	0.0190	0.0190	0.0190	0.0251
38	0.262	0.0054	0.0054	0.0064	0.0071							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH 5.22 3.4221E 06 6.7277E 05 6.88 827.5 0.85277E 06 0.0018 RS(PETER) TEST NO. 195
MACH 5.22 1.0431E 06 6.7277E 05 101.17 1489.5 366.71 0.0060 RS(SFT) RUN NO. 5

CHAN	T/C	TH(DEG K)	TH(DEG P)	Q(W/CM2)	Q(BTU/FT2-SEC)	Q(SW/CM2)	Q(S(BTU/FT2-SEC)	ST(10-850)	ST(10-900)	TIME(SEC)
1	1	310.9	559.6	0.539	0.475	75.434	66.468	3.7434E-04	4.1302E-04	0.257
2	2	310.8	559.5	0.518	0.457	75.445	66.477	3.5011E-04	3.9732E-04	0.349
3	3	311.2	560.2	0.516	0.454	75.398	66.427	3.5868E-04	3.9577E-04	0.415
4	4	311.4	560.6	0.505	0.445	75.358	66.401	3.5132E-04	3.8767E-04	0.413
5	5	311.3	560.4	0.542	0.477	75.373	66.414	3.7699E-04	4.1599E-04	0.423
6	6	311.0	559.8	0.573	0.505	75.419	66.454	3.9846E-04	4.3965E-04	0.432
7	7	310.6	559.1	0.638	0.563	75.479	66.507	4.4347E-04	4.8927E-04	0.441
8	8	309.8	557.7	0.701	0.618	75.590	66.605	4.8636E-04	5.3649E-04	0.445
9	9	309.1	556.3	0.847	0.746	75.703	66.705	5.8623E-04	6.4654E-04	0.455
10	10	308.7	555.7	1.031	0.908	75.755	66.750	7.1318E-04	7.8649E-04	0.458
11	11	307.8	554.1	1.771	1.561	75.882	66.862	1.2229E-03	1.3483E-03	0.434
12	12	307.6	553.7	2.715	2.392	75.915	66.891	1.873E-03	2.0653E-03	0.442
13	13	307.7	553.9	5.384	5.273	75.899	66.877	4.1304E-03	4.5539E-03	0.434
14	14	306.8	552.3	12.038	10.607	76.026	66.990	8.2938E-03	9.1425E-03	0.384
15	15	307.4	553.2	3.114	2.744	75.953	66.925	2.1478E-03	2.3678E-03	0.578
16	16	306.4	551.5	1.386	1.221	76.091	67.046	9.5411E-04	1.0516E-03	0.578
17	17	306.8	552.2	2.252	1.984	76.038	67.000	1.5512E-03	1.7099E-03	0.168
18	18	307.3	553.1	3.336	2.939	75.963	66.934	2.3002E-03	2.5359E-03	0.282
19	19	308.4	555.0	6.005	5.291	75.807	66.796	4.1505E-03	4.5767E-03	0.268
20	20	307.6	553.6	7.508	6.616	75.921	66.897	5.1807E-03	5.7118E-03	0.299
21	21	306.1	551.1	1.378	1.214	76.130	67.081	9.4793E-04	1.0448E-03	0.210
22	22	305.4	551.5	1.373	1.210	76.093	67.049	9.4500E-04	1.0416E-03	0.215
23	23	308.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*****
24	24	306.7	552.1	1.078	0.950	76.047	67.008	7.4220E-04	8.1812E-04	0.288
25	25	306.8	552.2	1.978	1.742	76.034	66.996	1.3622E-03	1.5016E-03	0.312
26	26	306.3	551.4	0.351	0.309	76.101	67.056	2.4148E-04	2.6616E-04	0.320
27	27	306.4	551.5	0.844	0.743	76.096	67.051	5.8070E-04	6.4006E-04	0.430
28	28	306.6	551.8	2.394	2.109	76.069	67.027	1.6483E-03	1.8168E-03	0.315
29	29	306.3	551.4	0.357	0.315	76.104	67.058	2.4585E-04	2.7098E-04	0.410
30	30	306.4	551.5	2.041	1.798	76.093	67.049	1.4044E-03	1.5480E-03	0.350
31	31	305.9	550.7	0.449	0.395	76.158	67.106	3.0843E-04	3.3992E-04	0.439
32	32	305.6	550.1	0.265	0.234	76.209	67.150	1.8228E-04	2.0088E-04	0.305
33	33	305.2	549.3	0.120	0.106	76.271	67.205	8.2299E-05	9.0610E-05	0.354
34	34	308.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*****
35	35	305.5	549.9	0.224	0.197	76.220	67.150	1.5396E-04	1.6966E-04	0.293
36	36	305.8	550.4	0.212	0.187	76.187	67.131	1.4563E-04	1.6049E-04	0.212
37	37	307.0	552.6	0.622	0.548	76.007	66.973	4.2853E-04	4.7240E-04	0.142
38	38	307.4	552.3	0.413	0.364	75.950	66.927	2.8488E-04	3.1406E-04	0.244
39	39	305.7	550.2	0.150	0.132	76.198	67.141	1.0305E-04	1.1356E-04	0.287
40	40	307.0	552.6	0.513	0.452	76.009	66.974	3.5377E-04	3.8977E-04	0.214
41	41	306.1	550.9	0.520	0.458	76.142	67.091	3.5741E-04	3.9392E-04	0.390

42	47	308.1	555.1	0.578	0.509	75.750	66.746	3.9953E-04	4.4060E-04	0.227
43	46	309.0	556.2	0.899	0.792	75.712	66.713	6.2250E-04	6.8654E-04	0.158
44	47	308.3	531.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45	48	305.7	550.2	0.698	0.615	76.197	67.140	4.7980E-04	5.2876E-04	0.271
46	50	307.8	554.0	14.054	12.383	75.894	66.873	9.7013E-03	1.0696E-02	0.236
47	51	307.8	554.1	13.762	12.126	75.884	66.864	9.5916E-03	1.0476E-02	0.314
48	53	308.5	555.3	10.029	8.837	75.785	66.777	6.9346E-03	7.6471E-03	0.331
49	55	308.5	555.3	8.464	7.458	75.787	66.778	5.8521E-03	6.4533E-03	0.327
50	57	308.1	553.4	6.614	5.828	75.780	66.773	4.5736E-03	5.0435E-03	0.334
51	59	308.6	555.4	5.160	4.547	75.778	66.770	3.5685E-03	3.9352E-03	0.317
52	60	309.7	557.4	11.599	10.220	75.616	66.628	8.0404E-03	8.8688E-03	0.179
53	61	310.0	558.1	12.212	10.761	75.561	66.580	8.4726E-03	9.3463E-03	0.284
54	65	310.8	559.4	9.506	8.376	75.450	66.481	6.6063E-03	7.2689E-03	0.279
55	68	311.3	560.4	6.299	5.550	75.375	66.416	4.3821E-03	4.8354E-03	0.204
56	69	312.6	562.6	15.621	13.764	75.190	66.252	1.0898E-02	1.2029E-02	0.243
57	70	313.0	563.4	12.818	11.295	75.131	66.201	8.9511E-03	9.8808E-03	0.257
58	72	313.7	564.7	9.742	8.584	75.025	66.107	6.8142E-03	7.5232E-03	0.243
59	73	306.0	558.8	0.125	0.110	76.151	67.099	8.5904E-05	9.4676E-05	0.152
60	74	306.1	551.1	0.126	0.111	76.130	67.081	8.6686E-05	9.5542E-05	0.299
61	75	306.1	550.9	0.239	0.210	76.142	67.091	1.6411E-04	1.8087E-04	0.309
62	76	306.8	552.2	0.236	0.208	76.036	66.998	1.6263E-04	1.7927E-04	0.281
63	77	309.3	556.7	0.290	0.255	75.675	66.680	2.0067E-04	2.2132E-04	0.449
64	78	309.5	557.1	0.201	0.177	75.642	66.651	1.3930E-04	1.5364E-04	0.418
65	79	309.6	557.3	0.466	0.410	75.620	66.631	3.2279E-04	3.5604E-04	0.337
66	80	310.3	558.5	0.213	0.187	75.524	66.547	1.4770E-04	1.6294E-04	0.400
67	81	312.6	562.8	3.752	3.306	75.181	66.245	2.6177E-03	2.8894E-03	0.551
68	82	312.5	562.4	0.763	0.672	75.209	66.269	5.3203E-04	5.8722E-04	0.531
69	83	312.9	563.2	0.272	0.240	75.145	66.213	1.9006E-04	2.0980E-04	0.405
70	84	313.3	563.9	0.323	0.285	75.087	66.162	2.2588E-04	2.4935E-04	0.465
71	85	311.0	559.8	0.468	0.413	75.419	66.455	3.2554E-04	3.5919E-04	0.443
72	86	313.0	563.3	0.722	0.636	75.134	66.203	5.0401E-04	5.5636E-04	0.326
73	87	315.4	567.7	0.957	0.843	76.780	65.891	6.7204E-04	7.4226E-04	0.396
74	88	319.2	574.6	1.286	1.133	74.226	65.403	9.1035E-04	1.0064E-03	0.333
75	89	322.4	580.4	1.403	1.237	73.753	64.986	1.0010E-03	1.1074E-03	0.356

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0126E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HUFFETT FIELD CALIF. PRELIMINARY DATA ***															TEST NO. 1950			
MACH 5.30 1.2593E 07 2.4758E 06 0.1973 27.56 851.7 0.87947E 08 0.0018															RUN NO. 68			
REL LENGTH(METER) PT(ATM) T(DEC K) M(JOULE/KG) RS(METER) RS(FT)															ORB DATED			
REL LENGTH(FT) PT(PSI) T(DEC R) M(BTU/LBM) RS(FT)															a = 60°, b = 0°			
PCCH	RE/FT	REL	LENGTH(FT)	PT(PSI)	T(DEC R)	M(BTU/LBM)	RS(FT)											
5.30	3.6384E 06	2.4758E 06	0.6454	405.12	1533.1	378.19	0.0060											
1	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
2	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
3	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
4	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
5	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
6	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
7	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
8	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
9	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
10	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
11	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
12	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
13	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
14	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
15	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
16	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
17	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
18	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
19	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
20	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
21	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
22	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
23	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
24	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
25	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
26	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
27	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
28	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
29	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
30	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
31	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
32	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
33	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
34	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
35	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
36	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
37	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											
38	U/QS	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000	H/HSTI-0000											

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PRELIMINARY DATA

TEST NO. 195
RUN NO. 6

TEST CENTER: HOFFETT FIELD CALIF.
TEST DATE: 0-87947E-06

TEST TYPE: RS(METER)
TEST TIME: 0-0018

TEST LOCATION: RS(FT)
TEST TIME: 0-0060

TEST TYPE: RS(FT)
TEST TIME: 0-0060

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TEST TIME: 0-0060

TEST TYPE: RS(FT)
TEST TIME: 0-0060

MECH: 5-30 1-2593E 07 2-4758E 06 0-197

REL: 2-4758E 06 0-645

REL: 2-4758E 06 0-645

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REL: 2-4758E 06 0-645

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REL: 2-4758E 06 0-645

42	45	323.8	582.9	0.875	0.771	150.381	132.506	1.6058E-04	1.7730E-04	-0.496
43	46	324.4	583.9	1.473	1.298	150.235	132.377	2.7055E-04	2.5876E-04	-0.498
44	47	320.9	577.7	1.465	1.291	151.206	133.233	2.6715E-04	2.5478E-04	-0.199
45	48	317.1	570.7	2.537	2.235	152.308	134.204	4.5872E-04	5.0572E-04	0.342
46	49	325.1	585.3	33.453	29.477	150.012	132.181	6.1552E-03	6.7981E-03	0.237
47	50	325.8	586.4	33.286	29.330	149.830	132.021	6.1329E-03	6.7745E-03	0.246
48	51	327.4	589.3	23.221	20.461	149.370	131.615	4.2936E-03	4.7455E-03	0.369
49	52	328.0	590.4	20.974	18.481	149.211	131.475	3.8828E-03	4.2911E-03	0.336
50	53	328.3	590.9	18.420	16.231	149.126	131.400	3.4122E-03	3.7713E-03	0.358
51	54	328.0	590.4	16.142	14.223	149.204	131.469	2.9833E-03	3.3026E-03	0.370
52	55	331.3	596.4	20.674	18.216	148.266	130.642	3.8551E-03	4.2638E-03	0.077
53	56	331.2	596.2	22.831	20.117	148.254	130.667	4.2565E-03	4.7076E-03	0.224
54	57	333.5	600.5	20.389	17.965	147.643	130.093	3.8204E-03	4.2276E-03	0.268
55	58	334.6	602.4	17.954	15.820	147.320	129.809	3.3724E-03	3.7332E-03	0.352
56	59	336.7	606.1	36.749	32.381	146.728	129.288	6.9351E-03	7.4801E-03	0.232
57	60	337.0	603.0	25.592	26.075	146.430	129.024	5.5571E-03	6.2006E-03	0.268
58	61	338.8	609.8	22.087	19.461	146.153	128.781	4.1870E-03	4.6390E-03	0.444
59	62	320.1	576.3	0.604	0.708	151.434	133.433	1.4631E-04	1.6142E-04	0.518
60	63	320.6	577.1	0.579	0.511	151.300	133.316	1.0557E-04	1.1678E-04	0.358
61	64	320.7	577.2	1.198	1.056	151.278	133.297	2.1832E-04	2.4088E-04	0.446
62	65	322.9	581.2	1.537	1.355	150.653	132.746	2.8151E-04	3.1075E-04	0.500
63	66	329.1	592.4	1.471	1.471	148.852	131.194	3.0938E-04	3.4258E-04	0.686
64	67	329.0	592.2	1.619	1.427	148.923	131.222	3.0044E-04	3.3212E-04	0.356
65	68	329.4	592.9	2.843	2.505	148.811	131.123	5.2793E-04	5.8344E-04	0.542
66	69	331.4	596.6	0.600	0.528	148.226	130.607	1.1183E-04	1.2369E-04	0.336
67	70	336.0	604.7	16.931	14.918	146.945	129.482	3.1898E-03	3.5316E-03	0.624
68	71	335.5	603.9	6.665	5.873	147.071	129.590	1.2545E-03	1.3889E-03	0.552
69	72	336.3	605.4	2.181	1.921	146.842	129.368	4.1116E-04	4.5529E-04	0.672
70	73	337.5	607.5	1.298	1.143	146.507	129.092	2.4531E-04	2.7172E-04	0.540
71	74	339.7	614.5	1.857	1.636	148.718	131.041	3.4511E-04	3.8158E-04	0.502
72	75	329.7	599.5	2.636	2.323	147.767	130.203	4.9342E-04	5.4595E-04	0.579
73	76	337.8	609.0	3.396	2.992	146.425	129.024	6.4236E-04	7.1155E-04	0.543
74	77	343.0	618.5	5.723	5.043	144.789	127.579	1.0967E-03	1.2165E-03	0.534
75	78	349.5	629.0	5.800	5.110	143.132	126.119	1.1263E-03	1.2512E-03	0.534

FREE-STREAM DENSITY-VELOCITY PRODUCT = 7.4444E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

WACH	REF/METER	PEL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JMILE/KG)	OS(METER)	TEST NO.
5.22	3.315E 06	6.5163E 05	0.197	6.61	923.4	0.84229E 06	0.0018	195
WACH	REF/METER	PEL	LENGTH(METER)	PT(PSI)	TT(DEG K)	HT(BYU/LBM)	OS(FT)	RUN NO.
5.22	1.0103E 06	6.5163E 05	0.645	97.15	1492.1	364.78	0.0060	7
WACH	REF/METER	PEL	LENGTH(METER)	PT(PSI)	TT(DEG K)	HT(BYU/LBM)	OS(FT)	RUN NO.
1	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
2	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
3	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
4	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
5	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
6	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
7	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
8	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
9	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
10	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
11	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
12	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
13	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
14	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
15	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
16	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
17	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
18	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
19	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
20	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
21	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
22	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
23	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
24	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
25	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
26	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
27	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
28	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
29	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
30	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
31	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
32	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
33	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
34	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
35	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
36	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
37	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
38	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
39	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
40	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020
41	0.371	0.0349	0.0415	0.0458	42	0.365	0.0017	0.0020

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION APES RESEARCH CENTER WOFFETT FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 195
WJCH REF/METER WJL LENGTH(METER) PT(ATM) TT(DEC K) HT(JOULE/KG) RSM(METER)															2011 30.
5.22	3.3165E 06	6.5163E 05	0.197	6.61V	823.4	0.84829E 06	0.0014								7
WJCH REF/FT REL LENGTH(FT) PT(PSI) TT(DEC R) HT(ATH/LBN) S(FT)															
5.22	1.0103E 06	6.5163E 05	0.665	97.16	1482.1	364.78	0.0060								
CHY	T/C	TM(DEC K)	TM(DEC R)	Q(W/CW2)	Q(RTU/FT2-SEC)	QS(W/CW2)	QS(RTU/FT2-S-C)	ST(0.500)	ST(0.550)	TIME(SEC)					
1	1	313.6	566.4	2.543	2.241	72.943	64.272	1.9607E-03	2.0551E-03	0.397					
2	2	313.3	563.9	1.350	1.190	72.983	64.208	9.8735E-04	1.0903E-03	0.416					
3	3	313.4	564.2	1.058	0.933	72.961	64.289	7.7420E-04	8.5603E-04	0.479					
4	4	313.3	564.0	0.923	0.813	72.972	64.299	6.7455E-04	7.4535E-04	0.442					
5	5	313.1	563.7	0.860	0.758	73.001	64.324	6.2948E-04	6.9403E-04	0.429					
6	6	312.9	563.1	0.773	0.681	73.043	64.350	5.6293E-04	6.2397E-04	0.417					
7	7	312.4	562.3	0.721	0.635	73.109	64.419	5.2627E-04	5.8107E-04	0.419					
8	8	311.6	561.0	0.681	0.600	73.215	64.512	4.9613E-04	5.4770E-04	0.427					
9	9	311.0	559.9	0.576	0.507	73.305	64.593	4.1972E-04	4.6217E-04	0.414					
10	10	310.4	558.7	0.469	0.413	73.396	64.672	3.4555E-04	3.7583E-04	0.411					
11	11	309.6	557.3	0.433	0.382	73.509	64.772	3.1412E-04	3.4681E-04	0.407					
12	12	308.7	556.7	0.000	0.000	0.000	0.000	0.0000	0.0000	2.613					
13	13	308.5	557.1	0.000	0.000	73.524	64.785	5.6292E-04	6.2113E-04	0.431					
14	14	308.6	555.5	3.368	2.968	73.652	64.897	2.4375E-03	2.6550E-03	0.414					
15	15	308.5	555.4	1.720	1.516	73.660	64.904	1.2448E-03	1.3133E-03	0.464					
16	16	308.5	557.0	0.308	0.271	73.526	64.786	2.2320E-04	2.4628E-04	-1.061					
17	17	307.8	554.2	0.293	0.258	73.755	64.668	2.1151E-04	2.3325E-04	-1.055					
18	18	301.4	542.5	0.103	0.090	74.650	65.803	7.3124E-05	8.0538E-05	0.307					
19	20	311.4	560.4	0.924	0.814	73.257	64.549	6.7248E-04	7.4233E-04	0.103					
20	22	299.4	539.0	0.000	0.000	0.000	0.000	0.0000	0.0000	0.822					
21	24	309.2	556.6	1.209	1.065	73.562	64.818	9.7424E-04	9.6675E-04	0.264					
22	25	309.1	556.7	1.847	1.629	73.553	64.810	1.3360E-03	1.4772E-03	0.359					
23	26	309.7	539.4	0.000	0.000	0.000	0.000	0.0000	0.0000	0.485					
24	27	309.6	557.3	0.584	0.515	73.507	64.769	4.2379E-04	4.6762E-04	0.055					
25	28	309.8	557.6	0.748	0.659	73.479	64.745	5.4200E-04	5.9007E-04	0.314					
26	29	309.8	555.8	0.849	0.748	73.621	64.870	6.1491E-04	6.7825E-04	0.438					
27	30	309.1	556.4	0.356	0.314	73.577	64.832	2.5778E-04	2.8441E-04	0.185					
28	31	309.4	539.0	0.000	0.000	0.000	0.000	0.0000	0.0000	1.241					
29	32	308.7	555.7	1.043	0.919	73.635	64.833	7.5525E-04	8.3315E-04	0.442					
30	34	309.1	555.3	0.331	0.292	73.595	64.839	2.3055E-04	2.6469E-04	-0.149					
31	33	308.3	555.0	0.110	0.097	73.699	64.930	7.9941E-05	8.9073E-05	-0.164					
32	35	308.1	554.5	1.003	0.884	73.727	64.963	7.2529E-04	8.0003E-04	0.459					
33	36	307.5	553.5	0.017	0.015	73.809	65.035	1.2445E-05	1.3778E-05	-1.374					
34	37	307.9	554.3	0.153	0.134	73.744	64.978	1.1029E-04	1.2165E-04	-0.158					
35	38	307.7	552.9	0.836	0.736	73.782	65.012	6.0340E-04	6.6581E-04	0.421					
36	39	308.2	554.8	0.156	0.137	73.707	64.846	1.1252E-04	1.2413E-04	0.292					
37	40	309.0	557.4	0.718	0.633	73.497	64.761	5.2087E-04	5.7475E-04	-0.015					
38	41	310.7	559.0	1.418	1.250	72.450	64.719	1.0296E-03	1.1362E-03	0.400					
39	42	308.0	554.5	0.124	0.109	73.732	64.968	9.9542E-05	9.8748E-05	0.187					
40	43	309.4	557.0	0.460	0.405	73.532	64.792	3.3324E-04	3.5735E-04	0.054					
41	44	309.5	555.3	0.504	0.411	73.663	64.807	5.0192E-04	5.5070E-04	0.372					

42	312.5	562.6	1.015	0.894	73.07	64.400	7.4072E-04	6.1750E-04	0.189
43	312.7	562.8	0.915	0.806	73.071	64.385	6.5780E-04	7.3738E-04	0.202
44	310.6	559.1	0.516	0.455	73.363	64.642	3.7501E-04	4.1380E-04	0.263
45	308.9	556.1	6.167	5.434	73.604	64.855	4.4657E-03	4.9268E-03	0.330
46	311.4	560.5	11.000	10.565	73.252	64.545	8.7300E-03	9.6370E-03	0.182
47	311.3	560.7	10.275	9.053	73.240	64.534	7.4830E-03	8.2605E-03	0.258
48	311.9	561.4	6.623	5.836	73.181	64.483	4.8280E-03	5.3901E-03	0.305
49	311.6	560.8	5.528	4.871	73.227	64.523	4.0267E-03	4.4461E-03	0.314
50	311.1	560.0	4.768	4.202	73.289	64.577	3.4702E-03	3.8304E-03	0.305
51	310.7	559.1	3.378	2.977	73.364	64.643	2.4557E-03	2.7104E-03	0.277
52	313.4	564.0	7.177	6.324	72.972	64.298	5.2490E-03	5.7858E-03	0.217
53	313.4	564.1	6.314	5.564	72.963	64.291	4.5185E-03	5.1007E-03	0.275
54	313.4	564.1	3.765	3.317	72.965	64.292	2.5338E-03	3.0113E-03	0.283
55	313.2	563.9	2.497	2.200	72.950	64.314	1.8236E-03	2.0161E-03	0.235
56	315.3	568.3	11.313	9.989	72.631	63.908	8.2135E-03	9.1918E-03	0.260
57	315.0	568.6	7.154	6.304	72.612	63.911	5.2417E-03	5.8110E-03	0.284
58	315.7	568.3	4.715	4.155	72.632	63.900	3.3460E-03	3.8307E-03	0.278
59	315.7	568.5	0.168	0.148	72.650	64.895	1.3130E-04	1.3827E-04	0.300
60	315.2	565.2	0.034	0.030	72.670	65.913	2.4324E-04	2.6947E-04	0.327
61	315.3	567.6	0.056	0.050	73.692	66.933	4.0764E-04	4.5031E-04	0.083
62	309.0	559.2	0.101	0.089	73.594	64.846	7.3302E-04	8.0911E-04	0.165
63	312.1	561.8	0.525	0.442	73.145	64.451	3.0257E-04	3.3228E-04	0.412
64	311.9	561.4	0.100	0.089	73.132	64.404	7.2092E-05	8.0084E-05	0.235
65	311.4	561.0	0.126	0.111	73.216	64.513	9.2051E-05	1.0162E-04	0.291
66	312.3	562.2	0.077	0.068	73.119	64.428	5.6242E-05	6.2059E-05	0.304
67	315.3	567.6	0.096	0.088	72.639	64.040	2.2745E-03	2.5131E-03	0.453
68	312.9	566.7	0.439	0.387	72.762	64.113	3.2130E-04	3.5627E-04	0.442
69	315.1	567.1	0.112	0.100	72.729	64.083	8.3306E-05	9.2035E-05	0.207
70	315.3	567.5	0.106	0.093	72.690	64.059	7.7621E-05	8.5772E-05	0.208
71	312.2	563.8	0.072	0.056	72.973	64.312	7.1054E-04	7.8685E-04	0.423
72	315.0	567.0	0.120	0.099	72.735	64.080	5.3202E-04	5.8908E-04	0.441
73	315.7	570.1	0.026	0.024	72.480	63.873	2.3006E-04	2.5522E-04	0.260
74	315.0	577.5	1.220	1.075	71.902	63.355	9.3714E-04	1.0025E-03	0.442
75	323.6	582.4	0.900	0.705	71.515	63.015	5.9862E-04	6.6072E-04	0.340

VELOCITY PRODUCT = 1.0435E-01 (SI) (G/S/FT/SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 3-5	
MACH		REL		LENGTH(METER)		PT(PSI)		TT(PSI)		TT(PSI)		PT(PSI)		ORB MATED		
5.22		3.1502E 06		6.1932E 05		0.197		6.80		864.5		0.89355E 06		0.0218		
5.22		9.6019E 05		6.1932E 05		0.645		99.96		1555.1		384.25		0.0060		
CHAN	T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)			
1	1	0.354	0.0068	0.0062	0.0080	0.0088	39	42	0.348	0.0127	0.0127	0.0150	0.0150	0.0165		
2	2	0.354	0.0057	0.0057	0.0067	0.0074	40	43	0.350	0.0396	0.0396	0.0468	0.0468	0.0513		
3	3	0.354	0.0061	0.0061	0.0072	0.0079	41	44	0.348	0.0087	0.0087	0.0102	0.0102	0.0113		
4	4	0.354	0.0054	0.0064	0.0076	0.0084	42	45	0.353	0.0666	0.0666	0.0788	0.0788	0.0868		
5	5	0.354	0.0060	0.0060	0.0071	0.0078	43	46	0.354	0.0607	0.0607	0.0791	0.0791	0.0868		
6	6	0.353	0.0067	0.0067	0.0079	0.0087	44	47	0.351	0.0256	0.0256	0.0302	0.0302	0.0332		
7	7	0.353	0.0069	0.0069	0.0081	0.0090	45	48	0.348	0.0156	0.0156	0.0184	0.0184	0.0202		
8	8	0.352	0.0063	0.0063	0.0081	0.0089	46	50	0.352	0.1260	0.1260	0.1490	0.1490	0.1640		
9	9	0.351	0.0071	0.0071	0.0084	0.0092	47	51	0.352	0.1125	0.1125	0.1330	0.1330	0.1464		
10	10	0.350	0.0074	0.0074	0.0088	0.0097	48	53	0.353	0.0691	0.0691	0.0817	0.0817	0.0899		
11	11	0.349	0.0067	0.0067	0.0079	0.0087	49	55	0.352	0.0566	0.0566	0.0669	0.0669	0.0736		
12	12	0.349	0.0060	0.0060	0.0072	0.0080	50	57	0.351	0.0570	0.0570	0.0674	0.0674	0.0741		
13	13	0.349	0.0088	0.0088	0.0104	0.0114	51	59	0.351	0.0431	0.0431	0.0509	0.0509	0.0560		
14	14	0.348	0.0177	0.0177	0.0209	0.0230	52	60	0.354	0.1255	0.1255	0.1485	0.1485	0.1634		
15	15	0.348	0.0048	0.0048	0.0057	0.0063	53	61	0.354	0.1073	0.1073	0.1269	0.1269	0.1397		
16	16	0.349	0.0804	0.0804	0.0950	0.1045	54	65	0.354	0.0690	0.0690	0.0816	0.0816	0.0898		
17	17	0.347	0.0711	0.0711	0.0840	0.0923	55	68	0.354	0.0448	0.0448	0.0530	0.0530	0.0583		
18	18	0.339	0.0143	0.0143	0.0168	0.0184	56	69	0.357	0.1939	0.1939	0.2296	0.2296	0.2528		
19	20	0.352	0.0574	0.0574	0.0679	0.0747	57	70	0.357	0.1156	0.1156	0.1368	0.1368	0.1507		
20	22	0.336	0.0000	0.0000	0.0000	0.0000	58	72	0.357	0.0705	0.0705	0.0834	0.0834	0.0919		
21	24	0.349	0.0312	0.0312	0.0368	0.0405	59	73	0.348	0.0050	0.0050	0.0059	0.0059	0.0065		
22	25	0.349	0.0188	0.0188	0.0222	0.0244	60	74	0.348	0.0026	0.0026	0.0031	0.0031	0.0034		
23	26	0.336	0.0000	0.0000	0.0000	0.0000	61	75	0.347	0.0024	0.0024	0.0031	0.0031	0.0034		
24	27	0.349	0.0552	0.0552	0.0652	0.0718	62	76	0.348	0.0024	0.0024	0.0028	0.0028	0.0031		
25	28	0.350	0.0296	0.0296	0.0349	0.0384	63	77	0.352	0.0117	0.0117	0.0139	0.0139	0.0153		
26	29	0.348	0.0070	0.0070	0.0083	0.0091	64	78	0.352	0.0029	0.0029	0.0034	0.0034	0.0038		
27	30	0.349	0.0339	0.0339	0.0366	0.0402	65	79	0.351	0.0047	0.0047	0.0056	0.0056	0.0061		
28	31	0.336	0.0000	0.0000	0.0000	0.0000	66	80	0.352	0.0042	0.0042	0.0050	0.0050	0.0055		
29	32	0.348	0.0048	0.0048	0.0057	0.0063	67	81	0.356	0.0684	0.0684	0.0810	0.0810	0.0892		
30	34	0.349	0.0546	0.0546	0.0646	0.0710	68	82	0.356	0.0134	0.0134	0.0159	0.0159	0.0175		
31	33	0.348	0.0152	0.0152	0.0180	0.0198	69	83	0.356	0.0029	0.0029	0.0034	0.0034	0.0037		
32	35	0.347	0.0061	0.0061	0.0073	0.0080	70	84	0.356	0.0030	0.0030	0.0035	0.0035	0.0039		
33	36	0.347	0.0077	0.0077	0.0091	0.0100	71	85	0.354	0.0197	0.0197	0.0233	0.0233	0.0256		
34	37	0.347	0.0270	0.0270	0.0319	0.0350	72	86	0.356	0.0138	0.0138	0.0164	0.0164	0.0180		
35	38	0.347	0.0086	0.0086	0.0102	0.0112	73	87	0.358	0.0062	0.0062	0.0074	0.0074	0.0081		
36	39	0.348	0.0153	0.0153	0.0181	0.0199	74	88	0.363	0.0228	0.0228	0.0271	0.0271	0.0298		
37	40	0.350	0.0799	0.0799	0.0945	0.1039	75	89	0.367	0.0183	0.0183	0.0217	0.0217	0.0240		
38	41	0.350	0.0243	0.0243	0.0287	0.0315										

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETT FIELD CALIF. *** PRELIMINARY DATA ***
 MACH 1 3.1502E 06 6.1932E 05 0.197 6.80 864.5 0.89255E 06 0.0018 0.0000 195
 RE/METER REL LENGTH(FT) PT(ATM) TT(DEG K) HT(JOULE/KG) RS(METER) RUN NO. 8

CHAN	T/C	TWIDEG K)	THIDEG R)	REL	LENGTH(FT)	PT(PSI)	Q(BTU/FT2-SEC)	Q(SW/CM2)	QS(BTU/FT2-SEC)	ST(0.350)	TIME(SEC)
1	1	314.9	566.9	0.545	0.480	0.480	80.233	70.696	3.6796E-04	4.0506E-04	0.174
2	2	314.6	566.3	0.455	0.401	0.401	80.274	70.732	3.6796E-04	4.0506E-04	0.174
3	3	314.9	566.9	0.486	0.428	0.428	80.228	70.692	3.2797E-04	3.6103E-04	0.339
4	4	314.9	566.9	0.516	0.455	0.455	80.232	70.695	3.4832E-04	3.8343E-04	0.293
5	5	314.8	566.7	0.483	0.426	0.426	80.247	70.708	3.2615E-04	3.5902E-04	0.288
6	6	314.6	566.0	0.539	0.475	0.475	80.303	70.758	3.6347E-04	4.0006E-04	0.314
7	7	313.9	565.0	0.553	0.487	0.487	80.382	70.827	3.7237E-04	4.0981E-04	0.356
8	8	313.0	563.5	0.549	0.484	0.484	80.507	70.937	3.6907E-04	4.0612E-04	0.337
9	9	312.1	561.8	0.572	0.504	0.504	80.638	71.053	3.8403E-04	4.2249E-04	0.456
10	10	311.4	560.6	0.601	0.530	0.530	80.739	71.142	4.0303E-04	4.4334E-04	0.456
11	11	310.6	559.0	0.542	0.478	0.478	80.865	71.253	3.6267E-04	3.9887E-04	0.354
12	12	308.7	569.7	0.609	0.500	0.500	80.879	71.265	0.0000	0.0000	2.802
13	13	310.5	558.9	0.712	0.628	0.628	80.879	71.265	4.7650E-04	5.2405E-04	0.402
14	14	309.5	557.1	1.432	1.282	1.282	81.020	71.389	9.5601E-04	1.0512E-03	0.383
15	15	309.6	557.3	0.392	0.346	0.346	81.010	71.381	2.6198E-04	2.8807E-04	0.412
16	16	310.8	559.5	0.502	0.436	0.436	80.832	71.224	4.3519E-03	4.7865E-03	0.174
17	17	309.0	556.3	0.576	0.508	0.508	81.090	71.452	3.4461E-03	4.2287E-03	0.172
18	18	301.6	542.9	1.171	1.032	1.032	82.173	72.406	7.6961E-04	8.4492E-04	0.356
19	19	312.9	563.3	0.626	0.576	0.576	80.521	70.950	3.1096E-03	3.4216E-03	0.310
20	20	259.2	538.5	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	1.991
21	21	310.2	558.3	2.521	2.222	2.222	80.927	71.307	1.6853E-03	1.8534E-03	0.426
22	22	310.2	558.3	1.517	1.337	1.337	80.926	71.307	1.0143E-03	1.1154E-03	0.312
23	23	299.3	538.7	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.000
24	24	310.9	559.6	0.462	0.400	0.400	80.820	71.214	2.9872E-03	3.2856E-03	0.273
25	25	311.2	560.2	2.389	2.105	2.105	80.775	71.173	1.6001E-03	1.7600E-03	0.421
26	26	309.4	557.0	0.567	0.499	0.499	81.032	71.400	3.7833E-04	4.1600E-04	0.289
27	27	310.4	558.8	2.503	2.205	2.205	80.886	71.271	1.6738E-03	1.8408E-03	0.376
28	28	299.2	538.5	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.588
29	29	309.5	557.0	0.390	0.344	0.344	81.027	71.396	2.6063E-04	2.8658E-04	0.325
30	30	310.5	558.9	0.420	0.385	0.385	80.879	71.265	2.9565E-03	3.2515E-03	0.302
31	31	309.6	557.3	1.232	1.086	1.086	81.009	71.380	8.2271E-04	9.0466E-04	0.407
32	32	308.9	555.9	0.499	0.439	0.439	81.115	71.474	3.3240E-04	3.6546E-04	0.496
33	33	308.4	555.1	0.626	0.552	0.552	81.184	71.534	4.1702E-04	4.5845E-04	0.337
34	34	309.1	556.3	2.187	1.927	1.927	81.084	71.446	1.4588E-03	1.6040E-03	0.352
35	35	308.4	555.2	0.699	0.616	0.616	81.175	71.527	4.6548E-04	5.1173E-04	0.367
36	36	309.5	557.0	1.243	1.095	1.095	81.027	71.395	8.2976E-04	9.1238E-04	0.498
37	37	311.4	560.5	0.455	0.400	0.400	80.747	71.149	4.3259E-03	4.7585E-03	0.298
38	38	311.7	561.1	1.958	1.725	1.725	80.701	71.108	1.3126E-03	1.4450E-03	0.313
39	39	309.3	556.7	1.027	0.905	0.905	81.054	71.419	6.8533E-04	7.5354E-04	0.399
40	40	311.0	559.8	2.822	2.478	2.478	80.800	71.195	2.1447E-03	2.3590E-03	0.315
41	41	309.8	557.6	0.703	0.619	0.619	80.982	71.356	4.6930E-04	5.1606E-04	0.457

42	45	314.4	566.0	5.352	4.715	80.302	70.757	3.4587E-03	3.9721E-03	0.201
43	46	314.4	566.6	4.872	4.293	80.250	70.711	3.2875E-03	3.6188E-03	0.215
44	47	312.2	561.9	2.060	1.815	80.630	71.046	1.3829E-03	1.5214E-03	0.245
45	48	309.4	556.9	1.261	1.111	81.040	71.407	8.4182E-04	9.2562E-04	0.215
46	49	313.3	564.0	10.138	8.933	80.466	70.902	6.8204E-03	7.5054E-03	0.137
47	50	313.5	564.2	9.050	7.974	80.444	70.882	6.0202E-03	6.7021E-03	0.260
48	51	313.6	564.5	5.553	4.893	80.422	70.863	3.7383E-03	4.1140E-03	0.310
49	52	313.1	563.6	4.553	4.012	80.497	70.929	3.0621E-03	3.3695E-03	0.333
50	53	312.6	562.7	4.591	4.045	80.568	70.991	3.0840E-03	3.3933E-03	0.332
51	54	312.0	561.6	3.472	3.060	80.659	71.071	2.3298E-03	2.5631E-03	0.282
52	55	315.2	567.3	10.062	8.866	80.194	70.662	6.7951E-03	7.4805E-03	0.223
53	56	314.8	566.6	0.611	7.588	80.251	70.712	5.8109E-03	6.3964E-03	0.322
54	57	314.8	566.6	5.534	4.877	80.251	70.712	3.7346E-03	4.1110E-03	0.295
55	58	314.7	566.4	3.593	3.166	80.269	70.727	2.4239E-03	2.6680E-03	0.196
56	59	317.6	571.7	15.478	13.638	79.842	70.351	1.0505E-02	1.1571E-02	0.381
57	60	317.7	571.8	9.224	8.128	79.829	70.340	6.2620E-03	6.8972E-03	0.104
58	61	317.5	571.5	5.627	4.958	79.856	70.364	3.8187E-03	4.2058E-03	0.257
59	62	319.6	557.3	0.403	0.355	81.008	71.379	2.6931E-04	2.9613E-04	0.349
60	63	319.4	556.9	0.211	0.186	81.041	71.408	1.4057E-04	1.5456E-04	0.155
61	64	319.2	556.5	0.214	0.189	81.073	71.436	1.4309E-04	1.5727E-04	0.312
62	65	310.0	558.1	0.195	0.172	80.945	71.323	1.3040E-04	1.4340E-04	0.074
63	66	317.6	564.4	0.944	0.832	80.427	70.867	6.3548E-04	6.9935E-04	0.451
64	67	313.1	563.6	0.232	0.205	80.494	70.926	1.5613E-04	1.7181E-04	0.326
65	68	312.6	562.7	0.380	0.335	80.568	70.992	2.5551E-04	2.8114E-04	0.372
66	69	313.5	564.3	0.340	0.300	80.441	70.880	2.2887E-04	2.5187E-04	0.334
67	70	317.0	570.6	5.467	4.817	79.930	70.429	3.7058E-03	4.0811E-03	0.629
68	71	316.3	569.4	1.073	0.946	80.026	70.514	7.2647E-04	7.9994E-04	0.508
69	72	316.7	570.0	0.229	0.202	79.978	70.472	1.5510E-04	1.7080E-04	0.382
70	73	316.9	570.5	0.236	0.208	79.941	70.438	1.6001E-04	1.7621E-04	0.360
71	74	315.0	567.0	1.580	1.392	80.221	70.686	1.0664E-03	1.1740E-03	0.372
72	75	316.9	570.4	1.106	0.974	79.947	70.444	7.4944E-04	8.2532E-04	0.338
73	76	318.7	573.7	0.495	0.436	79.679	70.208	3.3664E-04	3.7087E-04	0.334
74	77	323.3	581.9	1.803	1.588	79.013	69.621	1.2382E-03	1.3654E-03	0.351
75	78	326.3	587.4	1.438	1.267	78.570	69.231	9.9400E-04	1.0969E-03	0.314

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9339E-01 (SLUGS/FT²-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 195
MACH 5.22 3.2579E 05 6.4835E 05 0.197 6.63 827.2 0.85244E 06 0.0018															RUN NO. 9
MACH 5.22 1.0052E 06 6.4835E 05 0.045 97.40 1488.9 366.57 0.0060															
CHAN	T/C	TIME(SEC)	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	TIME(SEC)
1	1	322.9	581.3	22.438	19.771	72.275	63.684	1.6637E-02	1.8409E-02	0.235					
2	2	322.2	580.0	31.068	2.703	72.374	63.771	2.2713E-03	2.5127E-03	0.491					
3	3	321.6	578.8	7.054	6.216	72.467	63.854	5.2147E-03	5.7682E-03	0.560					
4	4	320.3	576.5	2.296	2.023	72.656	64.020	1.6925E-03	1.8715E-03	0.473					
5	5	319.5	575.0	1.598	1.408	72.769	64.119	1.1759E-03	1.3001E-03	0.442					
6	6	318.5	573.3	1.067	0.940	72.906	64.240	7.9349E-04	9.6601E-04	0.400					
7	7	317.5	571.5	0.798	0.703	73.048	64.365	5.8420E-04	6.4558E-04	0.365					
8	8	316.4	569.6	0.633	0.557	73.202	64.501	4.6221E-04	5.1064E-04	0.346					
9	9	315.7	568.2	0.534	0.471	73.310	64.596	3.8972E-04	4.3048E-04	0.373					
10	10	314.8	566.6	0.487	0.429	73.436	64.707	3.5425E-04	3.9122E-04	0.300					
11	11	313.8	564.9	0.405	0.357	73.573	64.828	2.9443E-04	3.2508E-04	0.264					
12	12	312.2	563.2	0.300	0.260	73.720	64.940	2.4000E-04	2.6500E-04	0.155					
13	13	311.4	561.5	0.235	0.207	73.843	65.066	1.9943E-03	1.0043E-03	0.294					
14	14	312.0	561.5	0.235	0.207	73.843	65.066	1.9943E-03	1.0043E-03	0.294					
15	15	312.0	562.0	0.498	0.439	73.808	65.035	3.6043E-04	3.9780E-04	0.340					
16	16	314.0	565.2	0.128	0.113	73.553	64.810	9.3308E-05	1.0303E-04	0.193					
17	17	315.0	567.1	0.397	0.350	73.404	64.679	2.8934E-04	3.1955E-04	0.269					
18	18	315.8	568.4	0.138	0.125	73.254	64.582	7.5757E-04	8.3683E-04	0.311					
19	19	312.5	562.6	0.551	0.486	73.761	64.993	3.9925E-04	4.4089E-04	0.325					
20	20	314.2	565.6	0.130	0.114	73.521	64.782	9.4324E-05	1.0415E-04	0.169					
21	21	312.4	562.4	0.487	0.429	73.778	65.008	3.5254E-04	3.8912E-04	0.309					
22	22	313.7	564.6	0.154	0.135	73.601	64.852	1.1151E-04	1.2312E-04	0.305					
23	23	314.3	565.8	0.154	0.135	73.507	64.770	1.1169E-04	1.2334E-04	0.229					
24	24	315.2	567.3	0.391	0.344	73.380	64.658	2.8470E-04	3.1455E-04	0.284					
25	25	315.1	569.0	1.043	0.919	73.247	64.540	7.6126E-04	8.4056E-04	0.315					
26	26	317.1	570.9	2.080	1.833	73.101	64.412	1.5227E-03	1.6825E-03	0.337					
27	27	317.6	571.7	3.222	2.859	73.035	64.354	2.3607E-03	2.6089E-03	0.347					
28	28	316.2	569.1	4.782	4.213	73.237	64.532	3.4921E-03	3.8579E-03	0.360					
29	29	312.6	562.7	0.501	0.441	73.748	64.582	3.6279E-04	4.0045E-04	0.277					
30	30	312.8	563.1	0.547	0.482	73.721	64.959	3.9681E-04	4.3802E-04	0.282					
31	31	313.8	564.8	0.214	0.188	73.584	64.838	1.5522E-04	1.7137E-04	0.306					
32	32	314.4	566.0	0.158	0.139	73.487	64.752	1.1510E-04	1.2710E-04	0.228					
33	33	315.3	567.6	0.344	0.303	73.363	64.643	2.5057E-04	2.7675E-04	0.315					
34	34	312.9	563.3	0.571	0.503	73.705	64.944	4.1412E-04	4.5714E-04	0.314					
35	35	313.1	563.6	0.668	0.588	73.680	64.922	4.8433E-04	5.3467E-04	0.325					
36	36	314.0	565.3	0.315	0.278	73.547	64.804	2.2903E-04	2.5289E-04	0.314					
37	37	314.5	566.1	0.197	0.173	73.476	64.742	1.4326E-04	1.5820E-04	0.285					
38	38	315.3	567.6	0.370	0.326	73.363	64.643	2.6965E-04	2.9782E-04	0.348					
39	39	316.5	569.7	1.008	0.888	73.151	64.491	7.3695E-04	8.1418E-04	0.346					
40	40	313.2	563.8	0.503	0.419	73.664	64.508	5.0995E-04	5.6296E-04	0.300					
41	41	312.5	562.6	0.787	0.594	73.760	64.592	5.7042E-04	6.2962E-04	0.321					

72	564.3	313.5	0.487	0.429	73.623	64.872	3.5332E-04	3.5008E-04	0.397
73	565.7	314.3	0.213	0.297	73.509	64.771	1.5465E-04	1.7076E-04	0.260
74	566.6	314.8	0.337	0.297	73.436	64.707	2.4570E-04	2.7134E-04	0.326
75	567.9	312.7	0.944	0.832	73.736	64.971	6.8354E-04	7.5455E-04	0.359
76	568.4	313.0	1.114	0.982	73.655	64.935	8.0801E-04	8.9157E-04	0.383
77	569.3	313.5	0.675	0.595	73.623	64.872	4.8993E-04	5.4078E-04	0.433
78	569.3	314.0	0.251	0.221	73.546	64.804	1.8233E-04	2.0133E-04	0.317
79	569.5	314.7	0.326	0.287	73.449	64.718	2.3694E-04	2.6187E-04	0.341
80	568.5	315.8	1.060	0.934	73.252	64.580	7.7370E-04	8.5464E-04	0.333
81	570.4	316.9	2.298	2.025	73.137	64.444	1.6807E-03	1.8570E-03	0.351
82	571.8	317.4	3.445	3.212	73.030	64.349	2.6709E-03	2.9516E-03	0.351
83	571.0	317.2	4.927	4.341	73.052	64.404	3.6062E-03	3.9848E-03	0.357
84	563.6	313.1	1.315	1.159	73.681	64.923	9.5361E-04	1.0527E-03	0.425
85	564.2	313.6	0.883	0.778	73.574	64.829	6.4150E-04	7.0829E-04	0.413
86	565.3	314.0	0.305	0.268	73.547	64.804	2.2147E-04	2.4455E-04	0.401
87	566.6	314.8	0.391	0.265	73.444	64.714	2.1914E-04	2.4201E-04	0.366
88	567.3	314.2	1.855	1.625	73.663	64.907	1.3459E-03	1.4852E-03	0.435
89	567.2	315.0	1.421	1.252	73.549	64.807	1.0329E-03	1.1405E-03	0.429
90	565.6	315.0	0.375	0.330	73.519	64.781	2.7249E-04	3.0099E-04	0.415
91	567.9	315.2	0.588	0.871	73.337	64.620	7.2045E-04	7.9577E-04	0.323
92	564.5	314.6	2.047	1.803	73.609	64.860	1.4960E-03	1.6406E-03	0.441
93	565.6	314.2	2.105	1.855	73.522	64.783	1.5308E-03	1.6903E-03	0.407
94	565.5	315.1	0.475	0.419	73.530	64.790	3.4545E-04	3.8145E-04	0.450
95	564.9	315.0	2.025	1.784	73.574	64.829	1.4712E-03	1.6244E-03	0.412
96	566.7	314.9	2.674	2.356	73.428	64.700	1.9470E-03	2.1502E-03	0.397
97	566.0	314.8	0.549	0.487	73.442	64.713	3.5944E-04	4.4112E-04	0.395
98	567.1	315.1	1.057	0.931	73.000	64.323	7.7494E-04	8.5643E-04	0.451
99	565.4	315.2	2.148	1.892	73.528	64.797	1.5612E-03	1.7239E-03	0.403
100	567.3	315.0	2.910	2.564	73.403	64.678	2.1196E-03	2.3409E-03	0.360
101	567.1	315.0	0.677	0.597	73.385	64.662	4.9364E-04	5.4520E-04	0.364
102	565.4	315.1	1.904	1.677	73.524	64.793	1.3839E-03	1.5291E-03	0.402
103	567.5	315.3	3.585	3.159	73.369	64.648	2.6129E-03	2.8959E-03	0.304
104	567.4	315.2	0.885	0.780	73.379	64.657	6.4512E-04	7.1251E-04	0.400
105	568.6	315.0	0.936	0.824	73.282	64.571	6.8286E-04	7.5431E-04	0.294

REF-SHA DENSITY-VELOCITY PRODUCT = 1.9395E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH		RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEF K)	HT(JOULE/KG)	RS(METER)	TEST NO.	
5.30		1.3346E 01	2.6238E 06	0.197	27.93	828.13	0.85367E 06	0.0018	195	
5.30		4.0059E 06	2.6238E 06	0.645	410.60	1490.9	367.10	0.0060	10	
MACH		RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEC R)	HT(BTU/LBM)	RS(FT)	ET MATED	
5.30		4.0059E 06	2.6238E 06	0.645	410.60	1490.9	367.10	0.0060	$\alpha = 30^\circ, \beta = 0^\circ$	
T/C		Q/QS	H/HS(1.000)	H/HS(0.850)	CHAN	T/C	HA/HT	Q/QS	H/HS(1.000)	H/HS(0.850)
1	1	0.017	0.3422	0.4130	39	51	0.392	0.0108	0.0108	0.0129
2	2	0.015	0.1615	0.2172	40	54	0.372	0.0166	0.0166	0.0218
3	3	0.015	0.0985	0.1188	41	55	0.370	0.0144	0.0144	0.0190
4	4	0.010	0.0315	0.0380	42	56	0.377	0.0144	0.0144	0.0189
5	5	0.008	0.0234	0.0281	43	57	0.381	0.0106	0.0106	0.0140
6	6	0.005	0.0151	0.0182	44	58	0.386	0.0111	0.0111	0.0147
7	7	0.003	0.0131	0.0158	45	60	0.371	0.0128	0.0128	0.0169
8	8	0.003	0.0133	0.0160	46	61	0.370	0.0110	0.0110	0.0145
9	9	0.003	0.0134	0.0160	47	62	0.401	0.0000	0.0000	0.0000
10	10	0.003	0.0117	0.0139	48	63	0.382	0.0096	0.0096	0.0127
11	11	0.003	0.0088	0.0105	49	64	0.387	0.0097	0.0097	0.0128
12	12	0.003	0.0000	0.0000	50	65	0.392	0.0117	0.0117	0.0155
13	13	0.003	0.0142	0.0170	51	66	0.397	0.0396	0.0396	0.0527
14	14	0.003	0.0059	0.0117	52	67	0.401	0.0827	0.0827	0.1102
15	15	0.003	0.0054	0.0111	53	68	0.390	0.1619	0.1619	0.2147
16	16	0.003	0.0051	0.0061	54	70	0.369	0.0102	0.0102	0.0134
17	17	0.003	0.0031	0.0039	55	71	0.371	0.0094	0.0094	0.0123
18	18	0.003	0.0030	0.0117	56	72	0.381	0.0090	0.0090	0.0119
19	19	0.003	0.0106	0.0126	57	73	0.386	0.0086	0.0086	0.0113
20	20	0.003	0.0076	0.0100	58	77	0.374	0.0147	0.0147	0.0193
21	21	0.003	0.0101	0.0120	59	78	0.390	0.0125	0.0125	0.0165
22	22	0.003	0.0153	0.0182	60	79	0.383	0.0090	0.0090	0.0119
23	23	0.003	0.0093	0.0111	61	81	0.390	0.0104	0.0104	0.0138
24	24	0.003	0.0051	0.0061	62	84	0.375	0.0127	0.0127	0.0167
25	25	0.003	0.0054	0.0113	63	85	0.382	0.0131	0.0131	0.0173
26	26	0.003	0.0228	0.0273	64	86	0.384	0.0091	0.0091	0.0121
27	27	0.003	0.0517	0.0620	65	90	0.372	0.0255	0.0255	0.0335
28	28	0.003	0.1421	0.1699	66	91	0.380	0.0280	0.0280	0.0370
29	29	0.003	0.0111	0.0132	67	92	0.384	0.0125	0.0125	0.0165
30	30	0.003	0.0123	0.0147	68	94	0.392	0.0097	0.0097	0.0129
31	31	0.003	0.0194	0.0231	69	98	0.376	0.0454	0.0454	0.0597
32	32	0.003	0.0123	0.0146	70	99	0.386	0.0434	0.0434	0.0575
33	33	0.003	0.0097	0.0116	71	100	0.389	0.0147	0.0147	0.0195
34	34	0.003	0.0152	0.0180	72	103	0.378	0.0560	0.0560	0.0738
35	35	0.003	0.0172	0.0204	73	104	0.386	0.0610	0.0610	0.0807
36	36	0.003	0.0200	0.0239	74	105	0.389	0.0232	0.0232	0.0307
37	37	0.003	0.0147	0.0176	75	107	0.393	0.0100	0.0100	0.0133
38	38	0.003	0.0131	0.0156	76	107	0.393	0.0100	0.0100	0.0133

PRECEDING PAGE BLANK NOT FT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION - ARES RESEARCH CENTER, MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***											
MACH		REL	LENGTH (FT)	PT (ATM)	TT (DEG K)	HT (FOUR/AG)	RS (METER)	TEST NO.		RUN NO.	
5.30	1.3340E 07	2.6238E 06	0.197	27.53	828.3	0.85367E 06	0.0018	195	10		
MACH		REL	LENGTH (FT)	PT (PSI)	TT (DEG R)	HT (BTU/LBM)	RS (FT)				
5.30	4.0619E 06	2.6238E 06	0.645	410.60	1490.9	367.10	0.0060				
CHAN	T/C	TIME (K)	TIME (R)	Q (W/CM2)	Q (BTU/FT2-SEC)	Q (W/CM2)	Q (BTU/FT2-SEC)	ST (0.900)	ST (0.850)	TIME (SEC)	
1	1	354.3	637.7	46.345	40.836	135.427	119.330	9.3264E-03	1.0403E-02	0.426	
2	2	352.7	634.8	21.947	19.338	135.893	119.740	4.3989E-03	4.5044E-03	0.571	
3	3	351.7	633.0	13.414	11.820	136.170	119.984	2.6823E-03	2.5897E-03	0.737	
4	4	348.7	627.6	4.320	3.807	137.019	120.732	8.5770E-04	9.5522E-04	0.682	
5	5	347.1	624.7	3.212	2.831	137.478	121.137	6.3527E-04	7.0718E-04	0.636	
6	6	344.3	619.8	2.088	1.840	138.256	121.823	4.1022E-04	4.5632E-04	0.568	
7	7	341.6	614.9	1.828	1.611	139.025	122.500	3.5634E-04	3.5666E-04	0.478	
8	8	338.3	608.9	1.864	1.643	139.973	123.335	3.6104E-04	4.0058E-04	0.485	
9	9	334.0	601.3	1.886	1.662	141.175	124.395	3.6166E-04	4.0123E-04	0.615	
10	10	331.1	596.1	1.656	1.459	141.994	125.116	3.1549E-04	3.4975E-04	0.447	
11	11	327.2	589.2	1.252	1.103	143.078	126.071	2.3645E-04	2.6188E-04	0.435	
12	12	338.7	609.7	0.000	0.000	0.000	0.000	0.0000	0.0000	2.307	
13	13	331.2	596.2	2.017	1.777	141.975	125.099	3.8433E-04	4.2608E-04	0.425	
14	14	316.2	569.2	1.442	1.271	146.238	128.855	2.5344E-04	2.5344E-04	0.439	
15	15	316.3	569.4	1.368	1.205	146.214	128.835	2.5201E-04	2.7838E-04	0.422	
16	16	325.2	585.3	0.735	0.648	143.653	126.613	1.3813E-04	1.5291E-04	0.810	
17	17	328.8	591.8	0.461	0.406	142.660	125.703	8.7278E-05	9.6700E-05	0.710	
18	18	332.9	599.2	1.380	1.216	141.495	124.676	2.6390E-04	2.5269E-04	0.486	
19	19	316.2	569.1	1.550	1.366	146.262	128.876	2.8538E-04	2.1523E-04	0.416	
20	20	325.6	586.2	1.088	0.958	143.560	126.495	2.0460E-04	2.2651E-04	0.563	
21	21	315.3	567.5	1.481	1.305	146.517	129.102	2.7215E-04	3.0559E-04	0.297	
22	22	321.0	577.7	2.218	1.955	144.893	127.671	4.1269E-04	4.5859E-04	0.624	
23	23	325.1	582.2	1.341	1.182	143.705	126.623	2.5200E-04	2.7895E-04	0.549	
24	24	328.5	591.3	0.730	0.643	142.744	125.777	1.3822E-04	1.5313E-04	0.573	
25	25	332.6	598.7	1.333	1.174	141.577	124.748	2.5477E-04	2.8254E-04	0.435	
26	26	336.6	605.9	3.199	2.818	140.450	123.756	6.1708E-04	6.8503E-04	0.468	
27	27	338.6	609.5	7.230	6.370	139.872	123.247	1.4014E-03	1.5565E-03	0.600	
28	28	330.2	594.3	20.212	17.810	142.265	125.355	3.8420E-03	4.2582E-03	0.731	
29	29	315.7	568.3	1.625	1.432	146.379	128.980	2.9868E-04	3.3011E-04	0.324	
30	30	316.4	569.5	1.802	1.588	146.188	128.811	3.3200E-04	3.6074E-04	0.366	
31	31	320.8	577.4	2.808	2.474	144.947	127.718	5.2234E-04	5.7761E-04	0.684	
32	32	325.3	585.6	1.762	1.523	143.648	126.573	3.3130E-04	3.6576E-04	0.575	
33	33	328.8	591.9	1.381	1.217	142.652	125.696	2.6172E-04	2.8957E-04	0.647	
34	34	316.1	569.0	2.217	1.953	146.279	128.892	4.0809E-04	4.5077E-04	0.649	
35	35	316.4	569.5	2.503	2.211	146.201	128.823	4.6228E-04	5.1066E-04	0.501	
36	36	322.0	579.6	2.899	2.554	144.595	127.412	5.4078E-04	5.9816E-04	0.533	
37	37	325.6	586.1	2.112	1.861	143.570	126.504	3.9726E-04	4.3980E-04	0.575	
38	38	329.1	592.4	1.665	1.643	142.573	125.626	3.5356E-04	3.9176E-04	0.623	
39	39	333.5	600.3	1.524	1.342	141.321	124.523	2.9183E-04	3.2372E-04	0.532	
40	40	316.0	568.8	2.424	2.136	146.312	128.922	4.4615E-04	4.9279E-04	0.506	
41	41	314.4	566.0	2.119	1.867	146.749	129.305	3.8873E-04	4.2922E-04	0.506	

42	56	320.1	577.2	2.085	1.837	144.980	127.747	3.0710E-04	4.2679E-04	0.530
43	57	324.2	583.6	1.529	1.347	143.961	126.845	2.8670E-04	2.1730E-04	0.530
44	58	327.7	589.9	1.593	1.504	142.973	125.979	3.0105E-04	3.3345E-04	0.601
45	59	315.6	584.1	1.880	1.657	146.420	129.016	3.4579E-04	3.8151E-04	0.486
46	60	314.4	585.9	1.617	1.425	146.758	129.314	2.9667E-04	3.2756E-04	0.626
47	61	340.7	613.3	0.000	0.000	146.000	129.000	0.0000	0.0000	0.579
48	62	324.8	584.6	1.380	1.216	143.806	126.712	2.5930E-04	2.6688E-04	0.637
49	63	328.8	591.8	1.379	1.215	142.664	125.706	2.6119E-04	2.8939E-04	0.648
50	64	333.5	600.3	1.648	1.452	141.319	124.521	3.1567E-04	3.5016E-04	0.608
51	65	337.6	605.1	5.545	4.886	140.093	123.441	1.0729E-03	1.1915E-03	0.658
52	66	340.6	643.0	11.522	10.153	139.315	122.755	2.2436E-03	2.4935E-03	0.678
53	67	331.2	586.2	22.991	20.258	141.966	125.091	4.3807E-03	4.8566E-03	0.732
54	68	313.5	564.4	1.502	1.323	147.006	129.532	2.7492E-04	3.0349E-04	0.464
55	69	320.0	576.0	1.361	1.199	145.171	127.915	2.5275E-04	2.7944E-04	0.414
56	70	323.7	582.7	1.296	1.172	144.095	126.971	2.4269E-04	2.6855E-04	0.588
57	71	327.8	590.0	1.225	1.080	142.952	125.960	2.3162E-04	2.5655E-04	0.602
58	72	317.7	571.9	2.140	1.885	145.818	128.485	3.9533E-04	4.3684E-04	0.617
59	73	323.3	582.0	1.808	1.593	144.220	127.078	3.3632E-04	3.7434E-04	0.474
60	74	325.6	585.1	1.294	1.140	143.570	126.504	2.4331E-04	2.6937E-04	0.577
61	75	331.9	597.4	1.480	1.304	141.790	124.936	2.8248E-04	2.1321E-04	0.636
62	76	319.1	574.4	1.847	1.627	145.412	128.128	3.4229E-04	3.7836E-04	0.424
63	77	324.4	583.9	1.881	1.657	143.924	126.816	3.5273E-04	3.5038E-04	0.304
64	78	326.5	587.7	1.310	1.155	143.312	126.277	2.4699E-04	2.7350E-04	0.563
65	79	316.2	565.1	3.735	3.291	146.256	128.871	6.8772E-04	7.5965E-04	0.656
66	80	323.1	581.6	4.042	3.562	144.274	127.125	7.5606E-04	8.3652E-04	0.543
67	81	326.5	587.7	1.788	1.576	143.311	126.277	3.3702E-04	3.7320E-04	0.599
68	82	321.2	558.8	1.377	1.214	141.504	124.596	2.6364E-04	2.8243E-04	0.599
69	83	319.8	575.7	6.586	5.803	145.210	127.950	1.2226E-03	1.3515E-03	0.579
70	84	327.7	589.9	6.211	5.473	142.974	125.980	1.1739E-03	1.3002E-03	0.429
71	85	330.6	595.5	2.095	1.846	142.086	125.197	3.9889E-04	4.4218E-04	0.573
72	86	321.3	576.3	8.105	7.142	144.808	127.596	1.5096E-03	1.6595E-03	0.539
73	87	323.0	590.3	8.717	7.680	142.857	125.912	1.6464E-03	1.8260E-03	0.455
74	88	330.6	595.4	3.235	2.903	142.105	125.214	6.2708E-04	6.9511E-04	0.599
75	89	334.4	601.8	1.409	1.241	141.082	124.312	2.7037E-04	2.9597E-04	0.553

FREE-STREAM DENSITY-VELOCITY PRODUCT = 7.6729E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. PRELIMINARY DATA

TEST NO. 195
RUN NO. 11

053 MATED 3 = 30.5 ± 0°									
RS(FT) 0.0060									
H/HS(1.000) H/HS(0.900) H/HS(0.850)									
Q/QS									
HT(HTU/LAM)									
368.13									
TT(DEC RI)									
1494.9									
PT(PSI)									
411.80									
H/HS(1.000) H/HS(0.900) H/HS(0.850)									
Q/QS									
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TEST NO. 195
RUN NO. 11

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ANES RESEARCH CENTER MOFFETT FIELD CALIF. PRELIMINARY DATA

MACH 5.30 RE/METER 1.3326E 07 REL 2.6198E 06 LENGTH(METER) PT(ATM) TT(DEC K) HT(JOULE/KG) PS(METER) TEST NO. 195
MACH 5.30 RE/FT 4.0617E 06 REL 2.6198E 06 LENGTH(FT) PT(PSI) TT(DEC R) HT(BTU/LBM) PS(FT) RUN NO. 11

CHAN	T/C	T(DEC K)	TW(DEC K)	Q(W/CM2)	Q(BTU/FT2-SEC)	Q(SI/M2)	Q5(BTU/FT2-SEC)	CTIO(900)	TIME(SEC)
1	1	321.8	579.2	4.520	3.983	145.534	128.235	8.3794E-04	0.501
2	2	321.1	578.0	1.878	1.654	145.720	128.399	3.4756E-04	0.544
3	3	322.0	579.5	1.680	1.480	145.485	128.192	3.1160E-04	0.568
4	4	321.9	579.4	2.004	1.766	145.508	128.212	3.7154E-04	0.591
5	5	321.8	579.2	2.453	2.162	145.531	128.233	4.5492E-04	0.537
6	6	320.4	576.7	2.713	2.390	145.926	128.582	5.0139E-04	0.516
7	7	319.9	574.0	3.055	2.692	146.352	129.956	5.6265E-04	0.545
8	8	317.0	570.6	3.105	2.736	146.399	129.438	5.6959E-04	0.568
9	9	312.9	563.2	2.872	2.530	149.068	130.468	5.2196E-04	0.590
10	10	312.7	562.9	2.259	1.991	148.125	130.519	4.1042E-04	0.543
11	11	311.4	560.6	1.810	1.595	148.486	130.836	3.2793E-04	0.489
12	12	311.2	560.2	2.120	1.868	148.546	130.989	3.8389E-04	0.614
13	13	312.1	561.8	3.994	3.520	148.293	130.666	7.2475E-04	0.536
14	14	310.4	558.8	10.147	8.941	148.774	131.090	1.8344E-03	0.493
15	15	310.0	557.9	4.725	4.163	148.908	131.209	8.5325E-04	0.573
16	16	313.0	563.1	1.363	1.265	148.049	130.451	2.6097E-04	0.558
17	17	314.4	565.1	2.217	1.951	147.950	130.100	4.627E-04	0.179
18	18	316.8	570.1	2.498	2.201	146.941	129.475	4.5803E-04	0.019
19	19	319.6	575.2	3.289	2.898	146.161	128.788	6.0644E-04	0.213
20	20	314.6	566.3	4.061	3.576	147.572	130.031	7.4091E-04	0.283
21	21	311.1	559.9	5.294	4.664	148.590	130.928	9.5832E-04	0.437
22	22	310.0	558.0	4.833	4.258	149.900	131.701	8.7280E-04	0.454
23	23	312.8	569.9	0.000	0.000	140.577	123.955	0.0000	0.444
24	24	313.2	563.7	3.074	2.709	147.992	130.401	5.5912E-04	0.247
25	25	314.0	565.2	3.972	3.500	147.761	130.198	7.2362E-04	0.430
26	26	308.3	554.9	2.904	2.559	149.386	131.629	5.2248E-04	0.486
27	27	313.2	563.8	1.708	1.505	147.969	130.391	3.1071E-04	0.255
28	28	314.5	566.2	3.245	2.859	147.601	130.056	5.9197E-04	0.327
29	29	309.8	557.6	2.228	1.963	148.966	131.259	4.0224E-04	0.486
30	30	314.4	566.0	2.066	1.821	147.627	130.079	3.7687E-04	0.140
31	31	311.9	561.4	0.897	0.790	148.356	130.722	1.0261E-04	0.402
32	32	308.8	555.8	1.397	1.231	149.246	131.506	2.5155E-04	0.552
33	33	307.4	553.3	0.307	0.271	149.649	131.860	5.5178E-05	0.237
34	34	309.5	557.1	0.995	0.877	149.038	131.323	1.7955E-04	0.059
35	35	306.2	551.1	2.076	1.829	149.989	132.161	3.7188E-04	0.545
36	36	310.1	558.2	0.794	0.699	148.866	131.171	1.4539E-04	0.346
37	37	315.4	567.7	4.353	3.836	147.364	129.762	7.9500E-04	0.758
38	38	315.7	568.3	3.409	3.003	147.267	129.762	6.2340E-04	0.498
39	39	309.7	555.7	2.608	2.355	149.266	131.524	1.0445E-04	0.307
40	40	313.3	563.9	2.430	2.141	147.964	130.376	4.4203E-04	0.292
41	41	311.7	561.0	1.772	1.562	149.411	130.773	3.2130E-04	0.575

42	45	321.5	578.7	9.011	7.940	145.616	128.307	1.6693E-03	1.8+591-03	0.374
43	46	321.9	579.3	5.337	7.702	145.511	128.215	9.8952E-04	1.09431-03	0.435
44	47	315.4	567.7	2.422	2.134	147.353	129.838	4.4258E-04	4.88691-04	0.407
45	48	309.4	556.9	13.769	12.132	149.068	131.349	2.4835E-03	2.73841-03	0.321
46	49	321.1	578.0	23.901	21.060	145.717	128.396	4.4245E-03	4.89191-03	0.218
47	50	322.5	580.5	23.509	20.715	145.330	128.055	4.3652E-03	4.82791-03	0.349
48	51	323.2	581.8	19.010	16.751	145.126	127.876	3.5355E-03	3.91101-03	0.424
49	52	322.1	579.7	17.706	15.601	145.454	128.165	2.2844E-03	2.63221-03	0.381
50	53	320.6	577.1	15.041	13.253	145.871	128.532	2.7810E-03	3.07441-03	0.363
51	54	319.9	574.1	10.283	9.065	146.344	128.949	1.8952E-03	2.09431-03	0.338
52	55	327.1	582.8	15.930	14.037	144.011	126.893	2.9890E-03	3.30931-03	0.240
53	56	324.9	584.8	14.385	12.675	144.647	127.453	2.6854E-03	2.97131-03	0.349
54	57	324.2	583.6	18.137	15.981	144.833	127.617	2.3809E-03	2.74041-03	0.293
55	58	324.1	583.3	11.458	10.096	144.877	127.656	2.1351E-03	2.36241-03	0.227
56	59	320.0	584.0	25.865	22.791	143.184	126.165	4.8855E-03	5.41321-03	0.405
57	60	323.2	584.4	19.438	17.127	143.155	126.121	3.5723E-03	4.05981-03	0.272
58	61	329.8	593.6	14.182	12.496	143.260	126.232	2.6769E-03	2.95591-03	0.378
59	62	313.1	563.5	0.399	0.351	148.022	130.427	7.2925E-05	8.0001E-05	0.334
60	63	312.9	563.2	0.173	0.152	148.067	130.457	3.1456E-05	3.47131-05	0.222
61	64	310.2	558.3	0.757	0.667	148.844	131.152	1.3477E-04	1.50941-04	0.622
62	65	313.9	565.0	0.886	0.781	147.779	130.214	1.6145E-04	1.73211-04	0.334
63	66	327.3	580.1	1.338	1.179	145.345	128.135	2.4833E-04	2.74781-04	0.514
64	67	321.6	578.9	0.562	0.455	145.575	128.271	1.0421E-04	1.15231-04	0.581
65	68	320.3	576.6	1.586	1.398	145.951	128.603	2.9314E-04	3.24551-04	0.305
66	69	321.5	578.7	0.703	0.619	145.620	128.311	1.3019E-04	1.43981-04	0.477
67	70	328.4	591.1	13.396	11.804	143.642	126.549	2.5203E-03	2.79231-03	0.332
68	71	326.7	588.0	4.981	4.389	146.134	127.032	0.1505E-04	1.02371-04	0.734
69	72	327.5	589.5	0.957	0.843	143.902	126.797	1.7655E-04	1.98941-04	0.557
70	73	328.4	591.2	0.532	0.469	143.637	126.564	1.0017E-04	1.110951-04	0.507
71	74	322.2	579.9	1.759	1.550	145.417	128.132	2.2642E-04	2.510051-04	0.508
72	75	323.1	584.5	1.737	0.914	144.691	127.493	1.6305E-04	2.14151-04	0.377
73	76	327.3	589.1	0.647	0.570	143.962	126.830	1.2145E-04	1.34471-04	0.476
74	77	324.7	602.4	3.859	3.400	141.855	124.994	7.3673E-04	8.17231-04	0.565
75	78	329.4	611.0	1.882	1.659	140.502	123.801	3.6305E-04	4.03581-04	0.448

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

WACH 5-30 1-1950E 07 2-3493E 06 0-197 28-02 888.1 HT(FOUR/MS) PS(METER) TEST NO. 195
 MACH 5-30 3-6423E 06 2-3493E 06 0-645 411.91 1598.6 F 395.51 HT(FT) RUN NO. 12

CHN	T/C	W/HT	Q/C	H/MS(1.000)	H/MS(0.900)	H/MS(0.850)	CHN	T/C	W/HT	Q/C	H/MS(1.000)	H/MS(0.900)	H/MS(0.850)
1	1	0.345	0.1436	0.1836	0.2179	0.2404	39	51	0.349	0.0175	0.0173	0.0173	0.0210
2	2	0.343	0.0696	0.0696	0.0826	0.0911	40	54	0.343	0.0173	0.0173	0.0173	0.0231
3	3	0.341	0.0357	0.0357	0.0423	0.0476	41	55	0.343	0.0188	0.0188	0.0188	0.0234
4	4	0.343	0.0136	0.0136	0.0161	0.0178	42	54	0.345	0.0128	0.0128	0.0128	0.0233
5	5	0.347	0.0134	0.0134	0.0159	0.0175	43	57	0.347	0.0130	0.0130	0.0130	0.0234
6	6	0.345	0.0124	0.0124	0.0147	0.0162	44	59	0.348	0.0095	0.0095	0.0095	0.0169
7	7	0.343	0.0138	0.0138	0.0151	0.0167	45	60	0.344	0.0207	0.0207	0.0207	0.0123
8	8	0.341	0.0134	0.0134	0.0150	0.0174	46	61	0.345	0.0214	0.0214	0.0214	0.0259
9	9	0.346	0.0070	0.0070	0.0082	0.0090	47	62	0.346	0.0235	0.0235	0.0235	0.0278
10	10	0.343	0.0102	0.0102	0.0121	0.0134	48	63	0.346	0.0235	0.0235	0.0235	0.0304
11	11	0.342	0.0096	0.0096	0.0101	0.0111	49	64	0.349	0.0112	0.0112	0.0112	0.0309
12	12	0.343	0.0070	0.0070	0.0083	0.0091	50	65	0.351	0.0230	0.0230	0.0230	0.0146
13	13	0.370	0.0030	0.0030	0.0039	0.0050	51	65	0.353	0.0267	0.0267	0.0267	0.0272
14	14	0.343	0.0056	0.0056	0.0071	0.0082	52	67	0.357	0.1343	0.1343	0.1343	0.0259
15	15	0.348	0.0047	0.0047	0.0052	0.0057	53	68	0.358	0.0278	0.0278	0.0278	0.0272
16	16	0.343	0.0023	0.0023	0.0027	0.0031	54	70	0.355	0.0267	0.0267	0.0267	0.0272
17	17	0.350	0.0166	0.0166	0.0173	0.0193	55	72	0.348	0.0188	0.0188	0.0188	0.0146
18	18	0.342	0.0011	0.0011	0.0011	0.0014	56	73	0.350	0.0118	0.0118	0.0118	0.0146
19	19	0.347	0.0032	0.0032	0.0038	0.0041	57	77	0.347	0.0429	0.0429	0.0429	0.0146
20	20	0.341	0.0041	0.0041	0.0048	0.0054	58	75	0.348	0.0174	0.0174	0.0174	0.0146
21	21	0.341	0.0058	0.0058	0.0069	0.0076	59	79	0.350	0.0244	0.0244	0.0244	0.0146
22	22	0.347	0.0065	0.0065	0.0076	0.0082	60	81	0.351	0.0106	0.0106	0.0106	0.0146
23	23	0.345	0.0058	0.0058	0.0069	0.0076	61	84	0.348	0.0218	0.0218	0.0218	0.0146
24	24	0.349	0.0154	0.0154	0.0182	0.0200	62	85	0.349	0.1123	0.1123	0.1123	0.0146
25	25	0.352	0.0441	0.0441	0.0522	0.0574	63	86	0.350	0.0242	0.0242	0.0242	0.0146
26	26	0.345	0.0801	0.0801	0.0948	0.1044	64	86	0.350	0.0242	0.0242	0.0242	0.0146
27	27	0.345	0.1608	0.1608	0.1904	0.2097	65	90	0.347	0.0267	0.0267	0.0267	0.0146
28	28	0.346	0.0072	0.0072	0.0085	0.0094	66	91	0.350	0.1512	0.1512	0.1512	0.0146
29	29	0.341	0.0072	0.0072	0.0085	0.0094	67	92	0.352	0.0512	0.0512	0.0512	0.0146
30	30	0.342	0.0098	0.0098	0.0115	0.0126	68	94	0.353	0.0183	0.0183	0.0183	0.0146
31	31	0.346	0.0059	0.0059	0.0069	0.0078	69	93	0.349	0.1177	0.1177	0.1177	0.0146
32	32	0.346	0.0059	0.0059	0.0069	0.0078	70	93	0.352	0.2056	0.2056	0.2056	0.0146
33	33	0.348	0.0072	0.0072	0.0085	0.0094	71	93	0.354	0.0815	0.0815	0.0815	0.0146
34	34	0.343	0.0122	0.0122	0.0143	0.0158	72	93	0.351	0.1423	0.1423	0.1423	0.0146
35	35	0.343	0.0149	0.0149	0.0175	0.0193	73	93	0.353	0.1558	0.1558	0.1558	0.0146
36	36	0.345	0.0088	0.0088	0.0104	0.0114	74	93	0.356	0.1323	0.1323	0.1323	0.0146
37	37	0.347	0.0115	0.0115	0.0135	0.0149	75	93	0.356	0.0285	0.0285	0.0285	0.0146
38	38	0.348	0.0096	0.0096	0.0113	0.0124	75	93	0.356	0.0285	0.0285	0.0285	0.0146

42	56	315.8	568.5	2.112	1.861	165.151	145.520	3.5814E-04	3.9355E-04	-0.087
43	57	317.7	571.8	2.138	1.884	164.616	145.049	3.6390E-04	4.0007E-04	0.444
44	58	318.9	574.1	1.555	1.371	164.250	144.727	2.6540E-04	2.9185E-04	0.282
45	60	315.2	567.4	3.430	3.022	165.313	145.663	5.8101E-04	6.3845E-04	0.483
46	61	315.9	568.7	3.536	3.116	165.118	145.491	5.9981E-04	6.5919E-04	0.447
47	62	317.0	570.6	3.867	3.407	164.806	145.216	6.5729E-04	7.2252E-04	0.133
48	63	318.6	573.5	2.650	2.335	164.346	144.811	4.5192E-04	4.9693E-04	0.432
49	64	319.9	575.9	1.841	1.622	163.966	144.477	3.1479E-04	3.4623E-04	0.194
50	65	321.0	577.8	3.760	3.313	163.664	144.210	6.4416E-04	7.0864E-04	0.500
51	66	323.5	582.3	10.870	9.578	162.940	143.572	1.8715E-03	2.0599E-03	0.462
52	67	327.3	589.2	21.811	19.219	161.847	142.609	3.7843E-03	4.1685E-03	0.433
53	68	329.0	590.4	36.820	32.443	161.659	142.435	6.3972E-03	7.0475E-03	0.416
54	70	315.6	568.1	4.736	4.173	165.216	145.578	2.0268E-04	8.8209E-04	0.418
55	71	317.3	571.1	6.277	5.531	164.723	145.143	1.0676E-03	1.1736E-03	0.289
56	72	318.9	574.0	3.221	2.838	164.260	144.735	5.4963E-04	6.0440E-04	0.361
57	73	320.4	576.7	1.939	1.708	163.833	144.359	3.3177E-04	3.6394E-04	0.079
58	77	317.4	571.4	7.061	6.222	164.684	145.109	1.2013E-03	1.3206E-03	0.468
59	78	318.8	573.8	11.081	9.764	164.296	144.767	1.8902E-03	2.0785E-03	0.476
60	79	320.1	576.2	4.000	3.525	163.917	144.433	6.8414E-04	7.5250E-04	0.269
61	81	321.8	579.2	3.344	2.946	163.429	144.003	5.7378E-04	6.3132E-04	0.369
62	84	318.7	573.7	10.176	8.967	164.316	144.785	1.7356E-03	1.9084E-03	0.527
63	85	319.7	575.5	18.419	16.230	164.033	144.535	3.1476E-03	3.4618E-03	0.613
64	86	320.5	577.0	5.932	5.227	163.792	144.323	1.0154E-03	1.1169E-03	0.116
65	90	318.0	572.5	14.257	12.563	164.511	144.957	2.4284E-03	2.6699E-03	0.544
66	91	320.1	576.5	24.780	21.834	163.863	144.386	4.2395E-03	4.6632E-03	0.616
67	92	322.0	579.6	8.366	7.372	163.371	143.952	1.4362E-03	1.5803E-03	0.262
68	94	323.4	582.1	3.068	2.703	162.965	143.594	5.2812E-04	5.8127E-04	0.440
69	98	319.9	575.9	19.304	17.010	163.966	144.477	3.3003E-03	3.6299E-03	0.622
70	99	322.4	580.3	33.562	29.573	163.263	143.857	5.7658E-03	6.3447E-03	0.570
71	103	324.0	583.2	13.275	11.697	162.796	143.446	2.2881E-03	2.5186E-03	0.168
72	104	321.0	577.8	23.292	20.524	163.662	144.209	3.9905E-03	4.3900E-03	0.691
73	105	323.2	581.8	25.405	22.386	163.017	143.640	4.3720E-03	4.8118E-03	0.480
74	106	324.6	584.2	21.512	18.955	162.637	143.305	3.7117E-03	4.0862E-03	0.223
75	107	325.8	586.4	4.629	4.078	162.289	142.998	8.0060E-04	8.8158E-04	-0.682

FREE-STREAM DENSITY-VELOCITY PRODUCT = 7.3556E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MUFFETT FIELD CALIF. *** PRELIMINARY DATA ***

WACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEC K)	HT(JOULE/KG)	RS(METEPI)	TEST NO.	195
5.22	3.2228E 06	6.3359E 05	6.197	6.88	858.7	0.96719E 06	0.0018	001	13
WACH	FE/FT	REL	LENGTH(FT)	PT(PST)	TT(DEC R)	HT(BTU/LRM)	RS(FT)		
5.22	9.8231E 05	6.3359E 05	0.645	101.17	1545.7	381.51	0.0060		
CHAM	T/C	TM(DEC K)	TM(DEC R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.850)	TIME(SEC)
1	1	334.7	602.4	13.424	11.828	76.907	67.766	9.4088E-03	1.3407E-02
2	2	334.6	602.3	16.462	14.506	76.915	67.772	1.1537E-02	1.2761E-02
3	3	334.5	602.0	18.771	16.540	76.938	67.793	1.3150E-02	1.4545E-02
4	4	334.2	601.5	19.548	16.343	76.980	67.830	1.2986E-02	1.4363E-02
5	5	333.9	601.0	17.771	15.559	77.020	67.865	1.2435E-02	1.3752E-02
6	6	333.6	600.1	17.156	15.116	77.098	67.933	1.1990E-02	1.3259E-02
7	7	332.6	598.6	16.447	14.492	77.214	68.036	1.1475E-02	1.2687E-02
8	8	330.9	595.7	15.046	13.257	77.454	68.247	1.0460E-02	1.1561E-02
9	9	328.9	592.1	12.685	11.177	77.747	68.505	8.7813E-03	9.7006E-03
10	10	327.1	588.8	12.106	10.667	78.013	68.740	8.3480E-03	9.2182E-03
11	11	324.8	584.6	12.055	10.623	78.352	69.039	8.2719E-03	9.1294E-03
12	12	321.6	579.0	11.321	9.976	78.811	69.444	7.7165E-03	8.5106E-03
13	13	319.0	574.1	1.643	1.447	79.206	69.791	1.1132E-03	1.2271E-03
14	14	317.2	570.9	11.542	10.170	79.464	70.018	7.7938E-03	8.5876E-03
15	15	316.9	570.4	12.943	11.404	79.509	70.058	8.7338E-03	9.6227E-03
16	16	319.8	575.6	8.271	7.288	79.682	69.721	5.6152E-03	6.1906E-03
17	17	319.5	575.1	4.450	3.921	79.126	69.721	3.0191E-03	3.3282E-03
18	18	318.4	573.2	1.794	1.581	79.283	69.859	1.2147E-03	1.3388E-03
19	19	317.8	570.3	10.854	9.564	79.519	70.067	7.3234E-03	8.0686E-03
20	20	319.9	575.9	8.038	7.083	79.060	69.662	5.4592E-03	6.0188E-03
21	21	316.0	568.9	7.139	6.290	79.630	70.165	4.8091E-03	5.2976E-03
22	22	319.1	574.3	10.394	9.159	79.189	69.776	7.6462E-03	7.7670E-03
23	23	319.3	575.7	10.266	9.355	79.078	69.678	6.9702E-03	7.6845E-03
24	24	319.8	575.6	4.797	4.227	79.085	69.685	3.2568E-03	3.5964E-03
25	25	318.8	573.9	1.943	1.712	79.224	69.807	1.3165E-03	1.4511E-03
26	26	317.9	572.2	0.468	0.413	79.364	69.930	3.1677E-04	3.4908E-04
27	27	316.5	569.7	0.255	0.225	79.562	70.105	1.7210E-04	1.8960E-04
28	28	311.2	560.1	1.006	0.886	80.343	70.793	6.7072E-04	7.3810E-04
29	29	316.1	568.9	4.434	3.907	79.627	70.162	2.9867E-03	3.2901E-03
30	30	316.1	569.0	2.538	2.325	79.622	70.157	1.7776E-03	1.9582E-03
31	31	318.6	573.5	5.081	4.477	79.252	69.832	3.4412E-03	3.7928E-03
32	32	319.7	575.5	9.533	8.400	79.091	69.690	6.4714E-03	7.1344E-03
33	33	319.9	575.9	7.152	6.302	79.063	69.666	4.8572E-03	5.3550E-03
34	34	316.2	569.2	2.680	2.361	79.607	70.145	1.8059E-03	1.9895E-03
35	35	316.1	569.0	2.799	2.467	79.617	70.154	1.8861E-03	2.0778E-03
36	36	318.4	573.1	3.295	2.595	79.287	69.862	2.2238E-03	2.4509E-03
37	37	319.3	574.8	6.928	6.105	79.153	69.744	4.6991E-03	5.1800E-03
38	38	319.6	575.3	6.766	5.962	79.105	69.703	4.5923E-03	5.0627E-03
39	39	319.4	574.8	2.859	2.519	79.146	69.738	1.9391E-03	2.1376E-03
40	40	315.8	568.4	2.435	2.146	79.673	70.202	1.6396E-03	1.8060E-03
41	41	314.7	566.5	1.965	1.731	79.922	70.334	1.3200E-03	1.4537E-03

42	56	317.3	571.2	3.611	3.182	79.444	70.001	2.4389E-03	2.6873E-03	0.519
43	57	318.6	573.5	3.274	2.885	79.253	69.833	2.2173E-03	2.4439E-03	0.445
44	58	318.7	573.7	6.172	5.439	79.236	69.818	2.141813E-03	4.6087E-03	0.469
45	59	314.6	566.3	1.636	1.442	79.844	70.353	1.0988E-03	1.210E-03	0.453
46	60	315.0	566.9	1.448	1.276	79.790	70.306	9.7318E-04	1.0718E-03	0.427
47	61	316.8	570.3	2.815	2.480	79.514	70.062	1.8994E-03	2.0927E-03	0.517
48	62	318.0	572.5	2.324	2.047	79.338	69.907	1.5719E-03	1.7323E-03	0.377
49	63	318.6	573.4	4.781	4.213	79.263	69.341	3.2375E-03	3.5682E-03	0.469
50	64	318.3	573.0	4.149	3.656	79.295	69.870	2.8085E-03	3.0953E-03	0.502
51	65	317.6	571.7	1.561	1.375	79.400	69.962	1.0550E-03	1.1625E-03	0.563
52	66	317.3	571.2	0.442	0.389	79.443	70.000	2.9854E-04	3.2895E-04	0.666
53	67	312.4	562.4	0.415	0.366	80.160	70.631	2.7750E-04	3.0546E-04	0.517
54	68	314.3	565.7	1.330	1.172	79.888	70.392	8.9259E-04	9.8289E-04	0.326
55	69	316.3	569.3	2.542	2.240	79.595	70.134	1.7134E-03	1.8875E-03	0.554
56	70	317.3	571.2	3.098	2.730	79.443	70.000	2.0926E-03	2.3058E-03	0.475
57	71	318.1	572.5	4.256	3.750	79.336	69.906	2.8788E-03	3.1726E-03	0.427
58	72	313.8	564.8	1.034	0.911	79.964	70.459	6.9313E-04	7.6317E-04	0.205
59	73	315.6	568.1	3.289	2.898	79.691	70.219	2.2138E-03	2.4384E-03	0.601
60	74	316.9	570.4	4.060	3.578	79.510	70.059	2.7399E-03	3.0189E-03	0.553
61	75	317.7	571.8	3.201	2.820	79.394	69.957	2.1633E-03	2.3839E-03	0.486
62	76	313.3	564.0	1.361	0.935	80.026	70.514	7.1066E-04	7.8240E-04	0.282
63	77	314.6	566.3	2.533	2.232	79.840	70.350	1.7013E-03	1.8735E-03	0.544
64	78	315.7	568.3	2.736	2.411	79.681	70.210	1.8417E-03	2.0286E-03	0.544
65	79	312.3	562.2	1.242	1.094	80.173	70.643	8.3011E-04	9.1372E-04	0.320
66	80	314.0	565.2	1.868	1.646	79.930	70.429	1.2531E-03	1.3798E-03	0.551
67	81	314.8	566.6	1.687	1.487	79.816	70.329	1.1336E-03	1.2485E-03	0.507
68	82	316.9	570.4	3.286	2.895	79.508	70.058	2.2172E-03	2.4429E-03	0.459
69	83	311.7	561.1	1.581	1.375	80.267	70.726	1.0421E-03	1.1469E-03	0.370
70	84	313.2	563.7	1.681	1.481	80.054	70.538	1.1254E-03	1.2389E-03	0.549
71	85	314.3	565.7	1.448	1.274	79.892	70.396	9.7072E-04	1.0689E-03	0.549
72	86	311.7	561.1	1.559	1.374	80.262	70.722	1.0407E-03	1.1454E-03	0.448
73	87	313.1	563.5	1.514	1.334	80.065	70.548	1.0133E-03	1.1155E-03	0.508
74	88	313.6	564.5	1.249	1.100	79.988	70.481	8.3696E-04	9.2150E-04	0.593
75	89	316.0	568.8	1.320	1.163	79.641	70.175	8.8913E-04	9.7943E-04	0.328

FAIR-STREAM DENSITY-VELOCITY PRODUCT = 1.9654E-01 (SLUGS/FT²-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFET FIELD CALIF. *** PRELIMINARY DATA ***										TEST NO. 195	
MACH		REL		PT(PSI)		TT(DEC R)		HT(FT)		RS(PETER)	
5.22	3.389E 06	6.6822E 05	6.92	833.7	0.85955E 06	0.0018					14
PE/FT		REL		LENGTH(FT)		PT(PSI)		TT(DEC R)		HT(FT)	
5.22	1.0360E 06	6.6822E 05	0.645	101.71	1500.6	369.63					
CH: A T/C TW(DEC K) TW(DEC R) Q(W/CM2) Q(BTU/FT2-SEC) OS(W/CM2) OS(BTU/FT2-SEC) ST(0.900) ST(0.850) T1(EI-SEC)											
1	1	312.8	563.0	3.509	3.092	76.335	67.262	2.4155E-03	2.6647E-03	0.472	
2	2	312.2	562.0	13.026	11.477	76.416	67.333	8.9559E-03	9.8789E-03	0.272	
3	3	312.2	561.9	16.007	14.104	76.420	67.337	1.1005E-02	1.2139E-02	0.414	
4	4	312.0	561.6	12.315	10.951	76.448	67.361	8.4633E-03	9.3350E-03	0.443	
5	5	311.6	560.9	10.229	9.013	76.505	67.411	7.0237E-03	7.7464E-03	0.420	
6	6	311.2	560.2	8.396	7.398	76.561	67.461	5.7605E-03	6.3528E-03	0.408	
7	7	310.8	559.4	6.926	6.103	76.626	67.518	4.7475E-03	5.2351E-03	0.422	
8	8	310.0	558.0	5.834	5.141	76.742	67.620	3.9921E-03	4.4013E-03	0.419	
9	9	309.2	556.6	4.508	3.972	76.850	67.715	3.0799E-03	3.3950E-03	0.427	
10	10	308.8	555.9	3.479	3.066	76.913	67.771	2.3746E-03	2.6173E-03	0.408	
11	11	308.3	554.9	1.759	1.550	76.992	67.840	1.1989E-03	1.3213E-03	0.288	
12	12	308.1	554.6	1.479	1.303	77.015	67.861	1.0080E-03	1.1108E-03	0.327	
13	13	307.8	554.0	2.783	2.452	77.069	67.908	1.8952E-03	2.0884E-03	0.439	
14	14	306.8	552.2	2.371	2.039	77.215	68.037	1.6111E-03	1.7749E-03	0.411	
15	15	306.8	552.2	1.713	1.509	77.209	68.032	1.1641E-03	1.2825E-03	0.451	
16	16	307.2	552.9	4.730	4.167	77.153	67.983	3.2165E-03	3.5440E-03	0.289	
17	17	307.6	553.7	4.285	3.776	77.088	67.925	2.9172E-03	3.2146E-03	0.278	
18	18	307.9	554.3	4.055	3.573	77.044	67.886	2.7620E-03	3.0438E-03	0.333	
19	19	308.4	555.2	2.504	2.206	76.968	67.819	1.7073E-03	1.8816E-03	0.309	
20	20	307.4	553.3	1.117	0.984	77.126	67.958	7.6016E-04	8.3759E-04	0.378	
21	21	307.2	553.0	2.636	2.323	77.150	67.980	1.7931E-03	1.9757E-03	0.377	
22	22	307.5	553.6	2.717	2.394	77.100	67.935	1.8492E-03	2.0376E-03	0.459	
23	23	307.8	553.6	0.000	0.000	72.530	63.909	0.0000	0.0000	*****	
24	24	307.6	553.6	2.580	2.274	77.097	67.933	1.7563E-03	1.9353E-03	0.371	
25	25	307.8	554.0	2.633	2.320	77.063	67.903	1.7933E-03	1.9762E-03	0.374	
26	26	309.2	556.5	13.710	12.080	76.864	67.728	9.3640E-03	1.0322E-02	0.398	
27	27	307.2	552.9	4.454	3.924	77.151	67.981	3.0291E-03	3.3375E-03	0.407	
28	28	307.5	553.4	3.235	2.850	77.112	67.946	2.2013E-03	2.4256E-03	0.400	
29	29	309.3	556.8	12.980	11.349	76.837	67.704	8.9006E-03	9.7012E-03	0.390	
30	30	307.3	553.1	5.418	4.774	77.137	67.969	3.6855E-03	4.0608E-03	0.375	
31	31	306.8	552.2	8.270	7.287	77.212	68.035	5.6194E-03	6.1910E-03	0.363	
32	32	308.5	555.3	12.257	10.808	76.959	67.811	8.3602E-03	9.2141E-03	0.385	
33	33	306.4	551.5	12.978	11.435	77.266	68.092	8.8112E-03	9.7068E-03	0.332	
34	34	306.7	552.0	8.878	7.823	77.229	68.049	6.0313E-03	6.6447E-03	0.340	
35	35	308.0	554.3	11.518	10.149	77.039	67.882	7.8467E-03	8.6471E-03	0.337	
36	36	307.5	553.4	15.077	13.284	77.110	67.944	1.0260E-02	1.1305E-02	0.417	
37	37	309.2	556.5	11.107	9.786	76.864	67.727	7.3859E-03	8.3620E-03	0.486	
38	38	310.4	558.7	22.440	19.773	76.680	67.565	1.5368E-02	1.6945E-02	0.397	
39	39	307.3	553.1	11.517	10.148	77.141	67.971	7.8343E-03	8.6322E-03	0.420	
40	40	308.7	555.7	12.548	11.057	76.927	67.783	8.5625E-03	9.4375E-03	0.349	
41	41	308.7	555.6	12.461	11.156	76.933	67.788	8.6396E-03	9.5213E-03	0.296	

42	45	310.7	559.3	6.302	5.553	76.635	67.526	4.3190E-03	4.7625E-03	0.436
43	46	310.4	558.8	7.196	6.341	76.678	67.564	4.9286E-03	5.4343E-03	0.504
44	47	308.5	555.3	4.776	4.208	76.960	67.812	3.2571E-03	3.135898E-03	0.360
45	48	309.3	556.7	17.620	15.525	76.846	67.712	1.2038E-02	1.3269E-02	0.300
46	49	308.3	555.0	3.240	2.855	76.985	67.834	2.2089E-03	2.4344E-03	0.494
47	51	308.4	555.1	2.303	2.029	76.973	67.823	1.5702E-03	1.7305E-03	0.449
48	53	308.6	555.5	1.762	1.552	76.943	67.797	1.2020E-03	1.3248E-03	0.356
49	55	308.3	555.0	1.312	1.156	76.985	67.834	8.9458E-04	9.8591E-04	0.332
50	57	308.2	554.7	0.824	0.815	77.008	67.854	6.3002E-04	6.9432E-04	0.267
51	59	308.3	554.9	1.181	1.041	76.996	67.844	8.0520E-04	8.8740E-04	0.357
52	60	311.3	560.3	0.625	0.551	76.555	67.455	4.2870E-04	4.7277E-04	0.644
53	61	310.4	558.7	0.527	0.464	76.680	67.565	3.6096E-04	3.9800E-04	0.400
54	65	310.4	558.7	0.495	0.436	76.681	67.567	3.3902E-04	3.7380E-04	0.261
55	68	311.0	559.8	0.998	0.879	76.590	67.486	6.8435E-04	7.5467E-04	0.485
56	69	312.5	562.5	0.494	0.435	76.371	67.293	3.3985E-04	3.7490E-04	0.392
57	70	312.6	562.6	0.347	0.306	76.365	67.288	2.3880E-04	2.6343E-04	0.450
58	72	313.2	563.7	0.800	0.705	76.275	67.208	5.5113E-04	6.0905E-04	0.491
59	73	309.3	554.9	22.939	20.213	76.993	67.842	1.5638E-02	1.7234E-02	0.301
60	74	309.3	554.9	18.119	15.966	76.989	67.838	1.2353E-02	1.3614E-02	0.324
61	75	307.5	553.5	16.142	14.224	77.103	67.938	1.0986E-02	1.2106E-02	0.331
62	76	308.0	554.4	11.577	10.201	77.029	67.873	7.8875E-03	8.6923E-03	0.328
63	77	311.8	561.3	22.573	19.889	76.471	67.381	1.5507E-02	1.7104E-02	0.299
64	78	311.5	560.6	16.271	14.337	76.526	67.430	1.1169E-02	1.2318E-02	0.286
65	79	311.4	560.6	13.547	11.937	76.528	67.432	9.2988E-03	1.0255E-02	0.284
66	80	311.5	560.7	11.091	9.780	76.522	67.426	7.6192E-03	8.4030E-03	0.268
67	81	315.1	567.1	18.914	16.668	75.997	66.963	1.3089E-02	1.4444E-02	0.241
68	82	314.7	566.5	17.725	15.618	76.050	67.010	1.2254E-02	1.3525E-02	0.281
69	83	314.5	566.1	15.522	13.677	76.083	67.040	1.0725E-02	1.1827E-02	0.254
70	84	314.1	565.3	12.729	11.216	76.144	67.093	8.7878E-03	9.6975E-03	0.255
71	85	313.4	564.1	11.131	9.608	76.245	67.182	7.6732E-03	8.4662E-03	0.463
72	86	314.6	566.3	13.567	11.955	76.068	67.026	9.3771E-03	1.0349E-02	0.256
73	87	310.1	568.9	9.174	8.093	75.852	66.836	6.3611E-03	7.0228E-03	0.363
74	88	321.0	577.7	5.068	4.465	75.137	66.206	3.5522E-03	3.9261E-03	0.509
75	89	323.9	582.9	2.682	2.363	74.715	65.834	1.8922E-03	2.0928E-03	0.395

FREE-STREAM DENSITY-VELOCITY PRODUCT = 260135E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AEROSPACE RESEARCH CENTER JOHNSON FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
 RUN NO. 15

TEST DATE 2-4-52
 TEST TIME 10:00 AM
 TEST LOCATION 1000 FT

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOPETT FIELD CALIF. *** PRELIMINARY DATA ***
 WACH RE/METER REL LENGTH(METER) PT(ATM) TT(DEG K) HT(JOULE/KG) PS(METER) TEST NO. 195
 5.22 3.4462E 06 6.7751E 05 0.197 6.90 825.5 0.3507E 06 0.0018 BUY NO. 15
 WACH RE/FT REL LENGTH(FT) PT(PSI) TT(DEG R) HT(BTU/LBM) PS(FT) 0.0060

CHAN	R/C	TIME(SEC)	Q(W/CM2)	Q(BTU/FT2-SEC)	Q5(W/CM2)	Q5(BTU/FT2-SEC)	ST(0.850)	TIME(SEC)
1	1	318.3	573.0	9.110	8.027	74.150	6.4366E-03	7.1154E-03
2	2	318.0	572.3	7.008	6.175	74.204	4.5473E-03	5.4685E-03
3	3	318.0	572.4	5.512	4.957	74.202	3.8515E-03	4.3015E-03
4	4	317.9	572.3	4.299	3.788	74.208	3.0344E-03	3.3541E-03
5	5	317.5	571.5	3.601	3.173	74.274	2.5396E-03	2.8069E-03
6	6	317.1	570.8	3.035	2.674	74.325	2.1384E-03	2.3633E-03
7	7	316.6	569.8	3.398	2.994	74.404	2.3918E-03	2.6429E-03
8	8	315.8	568.5	5.857	5.161	74.512	4.1151E-03	4.5464E-03
9	9	315.0	567.0	5.454	4.806	74.639	3.8245E-03	4.2245E-03
10	10	314.5	566.2	3.955	3.485	74.701	3.0605E-03	3.0605E-03
11	11	313.8	564.8	2.865	2.524	74.811	2.0036E-03	2.2125E-03
12	12	313.5	564.3	2.790	2.459	74.853	1.9504E-03	2.1537E-03
13	13	313.3	564.0	1.789	1.576	74.881	1.2498E-03	1.3800E-03
14	14	312.3	562.1	1.543	1.359	75.031	1.0752E-03	1.1869E-03
15	15	311.8	561.3	0.841	0.741	75.099	5.8581E-04	6.4661E-04
16	16	312.6	562.1	2.525	2.226	74.985	1.7620E-03	1.9452E-03
17	17	312.9	563.3	2.239	1.973	74.935	1.5629E-03	1.7256E-03
18	18	312.2	563.8	2.027	1.786	74.898	1.4159E-03	1.5634E-03
19	19	312.8	564.9	1.684	1.466	74.807	1.1636E-03	1.2850E-03
20	20	312.3	562.2	1.087	1.0958	75.027	7.5801E-04	8.3677E-04
21	21	312.4	562.4	0.646	0.569	75.008	4.5017E-04	4.5696E-04
22	22	312.5	562.5	1.553	1.368	75.000	1.0827E-03	1.1953E-03
23	23	312.8	563.1	0.000	0.000	71.164	0.0000	0.0000
24	24	312.7	562.9	2.224	1.959	74.968	1.5514E-03	1.7128E-03
25	25	312.9	563.2	0.986	0.869	74.946	6.8805E-04	7.5964E-04
26	26	312.9	563.2	6.472	5.703	74.940	4.5180E-03	4.9881E-03
27	27	312.3	562.2	4.926	4.341	75.023	3.4343E-03	3.7911E-03
28	28	312.4	562.4	1.152	1.015	75.009	8.0322E-04	8.8670E-04
29	29	312.8	563.1	7.327	6.456	74.953	5.1137E-03	5.6457E-03
30	30	312.3	562.1	2.761	2.433	75.031	1.9247E-03	2.1247E-03
31	31	311.8	561.3	3.302	2.909	75.098	2.2990E-03	2.5376E-03
32	32	312.2	562.0	7.478	6.589	75.044	5.2114E-03	5.7527E-03
33	33	311.2	560.2	5.445	4.798	75.190	3.7863E-03	4.1787E-03
34	34	311.6	560.8	2.969	2.616	75.135	2.0664E-03	2.2808E-03
35	35	311.8	561.2	7.084	6.242	75.106	4.9321E-03	5.4439E-03
36	36	312.0	561.6	4.914	4.330	75.073	3.4231E-03	3.7785E-03
37	37	313.2	563.7	10.355	9.124	74.899	7.2327E-03	7.9859E-03
38	38	313.6	564.6	33.227	29.277	74.834	2.3231E-02	2.5653E-02
39	39	313.2	563.7	5.005	4.410	75.088	3.4858E-03	3.8476E-03
40	40	313.0	563.4	2.629	2.316	74.921	1.8353E-03	2.0264E-03
41	41	312.4	562.4	13.970	12.309	75.010	9.7408E-03	1.0753E-02

42	45	316.1	568.9	54.61	4.811	74.478	65.625	3.8387E-03	4.2412E-03	0.599
43	46	315.8	568.5	54.148	4.536	74.516	65.659	3.6166E-03	3.9956E-03	0.412
44	47	314.0	565.2	2.727	2.403	74.784	65.895	3.9081E-03	2.1072E-03	0.338
45	48	313.5	564.4	30.888	27.217	74.848	65.952	2.1591E-02	2.3841E-02	0.258
46	49	313.6	564.6	3.596	3.168	74.832	65.938	2.5140E-03	2.7761E-03	0.221
47	50	313.5	564.4	2.673	2.356	74.849	65.952	1.8687E-03	2.0635E-03	0.271
48	51	314.1	565.3	1.318	1.161	74.773	65.885	9.2226E-04	1.0185E-03	0.326
49	52	313.8	564.8	1.146	1.010	74.817	65.924	8.0177E-04	8.8537E-04	0.299
50	53	313.3	563.9	1.032	0.909	74.885	65.984	7.2067E-04	7.9573E-04	0.292
51	54	312.9	563.2	0.552	0.487	74.944	66.035	3.8547E-04	4.2557E-04	0.292
52	55	316.9	570.5	0.892	0.786	74.354	65.516	6.2791E-04	6.9390E-04	0.574
53	56	316.1	569.0	0.673	0.593	74.471	65.619	4.7314E-04	5.2276E-04	0.362
54	57	315.7	568.3	0.481	0.424	74.529	65.670	3.3791E-04	3.7332E-04	0.278
55	58	315.6	568.1	0.473	0.417	74.549	65.688	3.3196E-04	3.6673E-04	0.507
56	59	316.6	573.5	0.672	0.592	74.112	65.303	4.7488E-04	5.2499E-04	0.359
57	60	318.6	573.5	0.633	0.558	74.107	65.298	4.4755E-04	4.9478E-04	0.435
58	61	318.5	573.3	0.854	0.752	74.127	65.316	6.0356E-04	6.6724E-04	0.327
59	62	312.5	562.5	9.668	8.519	75.004	66.088	6.7421E-03	7.4429E-03	0.289
60	63	312.4	562.3	6.382	5.623	75.018	66.101	4.4493E-03	4.9117E-03	0.311
61	64	311.8	561.3	6.344	5.590	75.099	66.172	4.4174E-03	4.8758E-03	0.312
62	65	312.2	562.0	7.779	6.855	75.042	66.122	5.4219E-03	5.9851E-03	0.308
63	66	316.1	569.0	10.636	9.372	74.472	65.620	7.4777E-03	8.2620E-03	0.309
64	67	315.7	568.2	6.676	5.882	74.534	65.675	4.6890E-03	5.1803E-03	0.271
65	68	315.6	568.1	7.159	6.308	74.549	65.688	5.0269E-03	5.5534E-03	0.280
66	69	315.6	568.1	7.827	6.897	74.549	65.688	5.4963E-03	6.0720E-03	0.278
67	70	319.8	575.6	13.161	11.597	73.939	65.150	9.3295E-03	1.0317E-02	0.315
68	71	319.1	574.6	7.959	7.039	74.032	65.232	5.6547E-03	6.2523E-03	0.299
69	72	319.0	574.2	7.101	6.257	74.050	65.248	5.0252E-03	5.5561E-03	0.269
70	73	318.6	573.6	6.570	5.789	74.104	65.296	4.6452E-03	5.1355E-03	0.297
71	74	317.8	572.1	10.879	9.586	74.222	65.400	7.6782E-03	8.4869E-03	0.335
72	75	319.4	575.0	11.979	10.555	73.990	65.195	8.4847E-03	9.3820E-03	0.293
73	76	321.3	578.3	5.921	5.217	73.721	64.958	4.2111E-03	4.6585E-03	0.355
74	77	325.6	586.0	4.734	4.171	73.097	64.408	3.4900E-03	3.7652E-03	0.462
75	78	328.5	591.2	3.188	2.809	72.673	64.035	2.3048E-03	2.5542E-03	0.303

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.022GE-01 (SLUGS/FT2-SFC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOPETT FIELD CALIF. *** PRELIMINARY DATA ***

WIND DIRECTION 36 1.5269E 05 0.137 825.7 0.85075E 06 0.0018
 WIND SPEED 36 1.1119E 06 0.645 97.76 1486.2 365.86 0.0060
 TEST NO. 195
 RUN NO. 16
 LI WIND
 1 = -50°, 2 = 0°

CHAN	T/C	WIND	C/GS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	C/GS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.374	0.3220	0.3856	0.4219	0.4063	39	51	0.382	0.0255	0.0337	0.0438
2	2	0.354	0.3032	0.3657	0.4032	0.3879	40	54	0.379	0.0277	0.0377	0.0450
3	3	0.393	0.3035	0.3634	0.4032	0.3879	41	55	0.378	0.0309	0.0368	0.0437
4	4	0.393	0.2446	0.2927	0.3247	0.3079	42	56	0.379	0.0378	0.0450	0.0498
5	5	0.393	0.2204	0.2617	0.2925	0.2740	43	57	0.380	0.0512	0.0611	0.0676
6	6	0.371	0.1912	0.2258	0.2536	0.2381	44	58	0.381	0.0360	0.0420	0.0474
7	7	0.379	0.1691	0.2010	0.2229	0.2079	45	60	0.379	0.0329	0.0393	0.0434
8	8	0.379	0.1416	0.1692	0.1875	0.1716	46	61	0.379	0.0307	0.0365	0.0404
9	9	0.379	0.1054	0.1271	0.1408	0.1271	47	62	0.379	0.0325	0.0387	0.0429
10	10	0.379	0.0934	0.1115	0.1235	0.1115	48	63	0.380	0.0471	0.0562	0.0622
11	11	0.379	0.0827	0.0987	0.1093	0.0987	49	64	0.381	0.0386	0.0460	0.0509
12	12	0.381	0.0706	0.0842	0.0932	0.0842	50	65	0.381	0.0147	0.0175	0.0194
13	13	0.381	0.0172	0.0206	0.0228	0.0206	51	66	0.381	0.0047	0.0056	0.0062
14	14	0.379	0.0601	0.0716	0.0792	0.0716	52	67	0.382	0.0054	0.0065	0.0072
15	15	0.379	0.0558	0.0663	0.0765	0.0663	53	68	0.377	0.0117	0.0143	0.0154
16	16	0.381	0.0420	0.0500	0.0558	0.0420	54	70	0.378	0.0270	0.0322	0.0356
17	17	0.382	0.0251	0.0299	0.0331	0.0251	55	71	0.379	0.0244	0.0291	0.0322
18	18	0.382	0.0120	0.0143	0.0158	0.0120	56	72	0.380	0.0350	0.0417	0.0462
19	19	0.379	0.0572	0.0682	0.0754	0.0572	57	73	0.381	0.0371	0.0442	0.0490
20	20	0.381	0.0419	0.0489	0.0541	0.0419	58	77	0.378	0.0222	0.0264	0.0292
21	21	0.379	0.1264	0.1507	0.1667	0.1264	59	78	0.379	0.0187	0.0223	0.0247
22	22	0.379	0.0785	0.0936	0.1036	0.0785	60	79	0.380	0.0282	0.0337	0.0372
23	23	0.381	0.0308	0.0368	0.0407	0.0308	61	81	0.381	0.0185	0.0221	0.0244
24	24	0.382	0.0226	0.0270	0.0299	0.0226	62	84	0.378	0.0239	0.0285	0.0315
25	25	0.382	0.0125	0.0149	0.0165	0.0125	63	85	0.379	0.0173	0.0206	0.0228
26	26	0.382	0.0043	0.0052	0.0057	0.0043	64	86	0.379	0.0206	0.0245	0.0272
27	27	0.381	0.0014	0.0017	0.0019	0.0014	65	90	0.378	0.0254	0.0303	0.0335
28	28	0.378	0.0129	0.0154	0.0171	0.0129	66	91	0.379	0.0211	0.0252	0.0279
29	29	0.379	0.1347	0.1606	0.1777	0.1347	67	92	0.379	0.0152	0.0182	0.0201
30	30	0.379	0.0793	0.0946	0.1046	0.0793	68	94	0.381	0.0196	0.0234	0.0259
31	31	0.390	0.0899	0.1072	0.1186	0.0899	69	98	0.378	0.0238	0.0283	0.0313
32	32	0.381	0.1035	0.1234	0.1366	0.1035	70	99	0.379	0.0212	0.0253	0.0280
33	33	0.382	0.0422	0.0504	0.0557	0.0422	71	100	0.379	0.0123	0.0147	0.0162
34	34	0.379	0.0573	0.0689	0.0762	0.0573	72	103	0.378	0.0201	0.0240	0.0265
35	35	0.379	0.0470	0.0560	0.0619	0.0470	73	104	0.379	0.0200	0.0238	0.0263
36	36	0.380	0.0590	0.0703	0.0778	0.0590	74	105	0.379	0.0097	0.0116	0.0128
37	37	0.381	0.0636	0.0759	0.0840	0.0636	75	107	0.380	0.0282	0.0336	0.0372
38	38	0.382	0.0439	0.0523	0.0579	0.0439						

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***											TEST NO. 195
											RUN NO. 16
MACH 5.22 RE/FT 1.0119E 06 REL 6.5269E 05 LENGTH(METER) 0.197 PT(ATM) 8.65 TT(DEG K) 825.7 HT(JOULE/KG) 0.85079E 06 RS(METER) 0.0018											
MACH 5.22 RE/FT 1.0119E 06 REL 6.5269E 05 LENGTH(FT) 0.645 PT(PSI) 97.76 TT(DEG R) 1486.2 HT(BTU/LBM) 365.86 RS(FT) 0.0060											
CHAN	T/C	TM(DEG K)	TM(DEG R)	Q(W/GM2)	Q(BTU/FT2-SEC)	Q(SI/CM2)	Q(SI/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)	
1	1	333.9	601.0	22.735	20.033	70.610	62.217	1.7262E-02	1.9156E-02	0.269	
2	2	333.6	600.5	21.632	19.061	70.651	62.253	1.6414E-02	1.8213E-02	0.276	
3	3	333.1	599.5	21.466	18.915	70.721	62.315	1.6270E-02	1.8050E-02	0.342	
4	4	332.3	598.2	17.323	15.264	70.833	62.414	1.3105E-02	1.4537E-02	0.388	
5	5	331.8	597.2	15.627	13.769	70.909	62.481	1.1807E-02	1.3095E-02	0.395	
6	6	330.9	595.6	13.583	11.968	71.035	62.591	1.0242E-02	1.1357E-02	0.401	
7	7	329.8	593.6	11.969	10.546	71.191	62.729	9.0022E-03	9.9793E-03	0.392	
8	8	328.7	591.6	10.102	8.901	71.352	62.871	7.5785E-03	8.3987E-03	0.403	
9	9	327.1	588.9	7.615	6.710	71.572	63.064	5.6926E-03	6.3063E-03	0.419	
10	10	326.1	587.0	6.697	5.901	71.720	63.195	4.9941E-03	5.5311E-03	0.389	
11	11	324.9	584.8	5.944	5.238	71.895	63.350	4.4207E-03	4.8945E-03	0.379	
12	12	323.0	581.5	5.092	4.487	72.159	63.582	3.7712E-03	4.1735E-03	0.343	
13	13	323.0	581.3	1.245	1.097	72.171	63.592	9.2152E-04	1.0198E-03	0.325	
14	14	320.6	577.1	4.358	3.840	72.503	63.885	3.2097E-03	3.5501E-03	0.376	
15	15	320.9	577.6	4.263	3.756	72.463	63.850	3.1419E-03	3.4753E-03	0.381	
16	16	322.5	580.5	3.031	2.671	72.240	63.653	2.2416E-03	2.4605E-03	0.359	
17	17	323.4	582.1	1.807	1.592	72.113	63.541	1.3394E-03	1.4874E-03	0.355	
18	18	323.6	582.4	0.864	0.761	72.085	63.516	6.4058E-04	7.0902E-04	0.370	
19	19	321.1	577.9	4.144	3.651	72.443	63.832	3.0552E-03	3.3795E-03	0.354	
20	20	322.7	580.8	2.960	2.608	72.213	63.629	2.1904E-03	2.4238E-03	0.349	
21	21	321.0	577.8	9.161	8.072	72.452	63.840	6.7528E-03	7.4695E-03	0.299	
22	22	322.1	579.8	5.677	5.002	72.295	63.702	4.1951E-03	4.6417E-03	0.489	
23	23	322.6	580.7	2.226	1.961	72.224	63.639	1.6465E-03	1.8220E-03	0.417	
24	24	323.2	581.7	1.632	1.438	72.140	63.565	1.2086E-03	1.3376E-03	0.340	
25	25	323.9	582.9	0.899	0.792	72.041	63.478	6.6701E-04	7.3832E-04	0.348	
26	26	323.7	582.6	0.312	0.275	72.066	63.500	2.3134E-04	2.5608E-04	0.388	
27	27	322.8	581.1	0.102	0.090	72.188	63.607	7.5417E-05	8.3459E-05	0.289	
28	28	319.8	575.7	0.940	0.828	72.620	63.988	6.9115E-04	7.6430E-04	0.406	
29	29	321.3	578.3	9.757	8.597	72.411	63.804	7.1970E-03	7.9614E-03	0.403	
30	30	321.3	578.4	5.744	5.061	72.403	63.797	4.2375E-03	4.6876E-03	0.430	
31	31	322.3	580.1	6.497	5.725	72.265	63.675	4.8032E-03	5.3147E-03	0.400	
32	32	323.0	581.4	7.469	6.581	72.167	63.589	5.5305E-03	6.1205E-03	0.344	
33	33	323.2	581.7	3.046	2.684	72.138	63.563	2.2567E-03	2.4975E-03	0.458	
34	34	321.3	578.4	4.185	3.687	72.405	63.798	3.0869E-03	3.4148E-03	0.422	
35	35	321.3	578.3	3.400	2.996	72.409	63.802	2.5081E-03	2.7745E-03	0.402	
36	36	322.3	580.1	4.263	3.756	72.270	63.679	3.1513E-03	3.4969E-03	0.384	
37	37	322.5	581.0	4.595	4.049	72.195	63.614	3.4007E-03	3.7835E-03	0.362	
38	38	323.2	581.8	3.165	2.789	72.130	63.557	2.2450E-03	2.5953E-03	0.389	
39	39	323.9	583.1	1.838	1.620	72.032	63.470	1.3642E-03	1.5101E-03	0.333	
40	40	321.4	578.6	2.732	2.408	72.387	63.783	2.0162E-03	2.2304E-03	0.395	
41	41	320.3	576.5	2.240	1.973	72.556	63.932	1.4481E-03	1.6227E-03	0.391	

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

42	50	321.4	576.5	2.736	2.410	72.359	63.793	2.0182E-03	2.2327E-03	0.460
43	51	322.2	579.5	3.704	3.264	72.283	63.692	2.7379E-03	2.0294E-03	0.357
44	52	322.6	580.6	2.597	2.288	72.226	63.641	1.9211E-03	2.1258E-03	0.370
45	53	320.7	577.2	2.388	2.104	72.500	63.882	1.7590E-03	1.9453E-03	0.343
46	54	320.8	577.5	2.223	1.958	72.478	63.863	1.6376E-03	1.8113E-03	0.344
47	55	321.3	578.4	2.353	2.073	72.405	63.799	1.7357E-03	1.9203E-03	0.389
48	56	322.0	579.5	3.409	3.004	72.314	63.719	2.5181E-03	2.7865E-03	0.365
49	57	322.5	580.5	2.785	2.454	72.233	63.647	2.0599E-03	2.2794E-03	0.375
50	58	323.1	581.5	1.058	0.932	72.153	63.577	7.8361E-04	8.673E-04	0.373
51	59	323.1	581.6	0.337	0.297	72.152	63.576	2.4946E-04	2.7508E-04	0.308
52	60	323.2	581.7	0.391	0.345	72.138	63.563	2.5001E-04	3.2086E-04	0.490
53	61	319.4	574.9	0.852	0.751	72.682	64.043	6.2603E-04	6.9223E-04	0.459
54	62	320.5	576.8	1.959	1.726	72.529	63.907	1.4424E-03	1.5953E-03	0.377
55	63	321.3	578.4	1.768	1.557	72.405	63.799	1.3039E-03	1.4424E-03	0.382
56	64	321.6	579.0	2.533	2.232	72.358	63.757	1.8702E-03	2.0691E-03	0.362
57	65	322.5	580.4	2.680	2.361	72.241	63.654	1.8201E-03	2.1932E-03	0.353
58	66	320.4	576.8	1.609	1.419	72.529	63.908	1.1844E-03	1.3103E-03	0.323
59	67	321.3	578.3	1.355	1.194	72.411	63.804	9.5942E-04	1.1056E-03	0.352
60	68	321.6	578.9	2.043	1.800	72.360	63.759	1.5022E-03	1.6886E-03	0.347
61	69	322.5	580.5	1.338	1.179	72.236	63.650	9.8545E-04	1.0949E-03	0.352
62	70	320.6	577.1	1.734	1.528	72.507	63.889	1.2773E-03	1.4127E-03	0.358
63	71	321.2	578.1	1.251	1.103	72.425	63.816	9.2269E-04	1.0209E-03	0.326
64	72	321.2	578.1	1.492	1.314	72.425	63.816	1.0999E-03	1.2167E-03	0.370
65	73	319.9	575.7	1.845	1.626	72.615	63.584	1.3585E-03	1.5015E-03	0.363
66	74	321.0	577.8	1.532	1.350	72.453	63.941	1.1292E-03	1.2491E-03	0.366
67	75	321.2	578.2	1.104	0.972	72.417	63.839	8.1397E-04	9.0042E-04	0.358
68	76	322.4	580.4	1.519	1.251	72.248	63.850	1.0495E-03	1.1613E-03	0.330
69	77	320.1	576.3	1.725	1.520	72.574	63.947	1.2690E-03	1.4034E-03	0.343
70	78	320.9	577.6	1.538	1.355	72.469	63.855	1.1335E-03	1.2538E-03	0.360
71	79	321.2	578.1	0.891	0.785	72.426	63.817	6.5707E-04	7.2684E-04	0.312
72	80	319.9	575.8	1.461	1.287	72.611	63.980	1.0740E-03	1.1977E-03	0.329
73	81	320.9	577.5	1.446	1.274	72.478	63.863	1.0658E-03	1.1788E-03	0.354
74	82	320.7	577.2	0.705	0.621	72.493	63.881	5.1920E-04	5.7427E-04	0.256
75	83	322.1	579.7	2.040	1.798	72.296	63.703	1.5075E-03	1.6800E-03	0.344

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9489E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

5.22 4.1532E 06 3.1651E 05 0.197 6.93 736.7 J.75394E 06 0.0318 0.0018 17

5.22 1.2659E 06 3.1651E 05 0.645 101.92 1326.0 324.21 0.0060 0.0060 17

ET MAILED 90° 8 = 0°

CN-4	1/C	PM/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HM/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.423	0.0344	0.0844	0.1021	0.1140	39	51	0.415	0.0173	0.0173	0.0209	0.0233
2	2	0.422	0.0407	0.0407	0.0493	0.0550	40	54	0.409	0.0355	0.0355	0.0428	0.0476
3	3	0.421	0.0354	0.0354	0.0428	0.0477	41	55	0.408	0.0353	0.0353	0.0425	0.0473
4	4	0.420	0.0328	0.0328	0.0396	0.0447	42	56	0.410	0.0362	0.0362	0.0436	0.0486
5	5	0.419	0.0301	0.0301	0.0364	0.0406	43	57	0.411	0.0268	0.0268	0.0323	0.0363
6	6	0.418	0.0231	0.0231	0.0279	0.0311	44	58	0.413	0.0202	0.0202	0.0243	0.0271
7	7	0.417	0.0188	0.0188	0.0227	0.0253	45	60	0.408	0.0323	0.0323	0.0389	0.0433
8	8	0.416	0.0151	0.0151	0.0204	0.0204	46	61	0.409	0.0280	0.0280	0.0337	0.0375
9	9	0.414	0.0111	0.0111	0.0133	0.0149	47	62	0.410	0.0391	0.0391	0.0471	0.0525
10	10	0.413	0.0096	0.0096	0.0116	0.0129	48	63	0.411	0.0327	0.0327	0.0394	0.0439
11	11	0.412	0.0075	0.0075	0.0114	0.0127	49	64	0.413	0.0279	0.0279	0.0337	0.0375
12	12	0.410	0.0090	0.0090	0.0109	0.0121	50	65	0.414	0.0203	0.0203	0.0245	0.0273
13	13	0.413	0.0155	0.0155	0.0187	0.0208	51	66	0.416	0.0486	0.0486	0.0587	0.0654
14	14	0.407	0.0034	0.0034	0.0059	0.0066	52	67	0.416	0.0905	0.0905	0.1092	0.1218
15	15	0.407	0.0099	0.0099	0.0119	0.0133	53	68	0.415	0.1593	0.1593	0.1922	0.2142
16	16	0.410	0.0163	0.0163	0.0196	0.0218	54	70	0.409	0.0304	0.0304	0.0365	0.0408
17	17	0.412	0.0120	0.0120	0.0151	0.0162	55	71	0.411	0.0393	0.0393	0.0473	0.0527
18	18	0.413	0.0172	0.0172	0.0207	0.0231	56	72	0.412	0.0407	0.0407	0.0491	0.0547
19	19	0.408	0.0136	0.0136	0.0163	0.0182	57	73	0.413	0.0364	0.0364	0.0438	0.0488
20	20	0.411	0.0173	0.0173	0.0208	0.0231	58	77	0.410	0.0431	0.0431	0.0519	0.0578
21	21	0.407	0.0171	0.0171	0.0206	0.0229	59	78	0.411	0.0535	0.0535	0.0645	0.0718
22	22	0.409	0.0153	0.0153	0.0184	0.0205	60	79	0.412	0.0501	0.0501	0.0604	0.0673
23	23	0.411	0.0183	0.0183	0.0220	0.0245	61	81	0.414	0.0342	0.0342	0.0413	0.0463
24	24	0.412	0.0142	0.0142	0.0171	0.0191	62	84	0.410	0.0650	0.0650	0.0782	0.0871
25	25	0.414	0.0174	0.0174	0.0209	0.0233	63	85	0.411	0.0816	0.0816	0.0984	0.1096
26	26	0.415	0.0467	0.0467	0.0563	0.0628	64	86	0.412	0.0707	0.0707	0.0852	0.0949
27	27	0.416	0.0844	0.0844	0.1018	0.1135	65	90	0.410	0.1007	0.1007	0.1212	0.1350
28	28	0.413	0.1594	0.1594	0.1922	0.2141	66	91	0.412	0.1235	0.1235	0.1488	0.1658
29	29	0.408	0.0202	0.0202	0.0243	0.0271	67	92	0.413	0.1155	0.1155	0.1392	0.1551
30	30	0.408	0.0243	0.0243	0.0292	0.0325	68	94	0.415	0.0809	0.0809	0.0976	0.1088
31	31	0.410	0.0229	0.0229	0.0276	0.0307	69	98	0.411	0.1439	0.1439	0.1734	0.1931
32	32	0.411	0.0193	0.0193	0.0233	0.0259	70	99	0.413	0.1722	0.1722	0.2075	0.2313
33	33	0.413	0.0146	0.0146	0.0175	0.0196	71	100	0.414	0.1582	0.1582	0.1908	0.2127
34	34	0.397	0.0000	0.0000	0.0000	0.0000	72	103	0.412	0.1813	0.1813	0.2185	0.2434
35	35	0.409	0.0336	0.0336	0.0404	0.0450	73	104	0.414	0.1813	0.1813	0.2186	0.2437
36	36	0.410	0.0307	0.0307	0.0370	0.0412	74	105	0.415	0.2198	0.2198	0.2651	0.2955
37	37	0.411	0.0236	0.0236	0.0284	0.0316	75	107	0.416	0.1050	0.1050	0.1267	0.1413
38	38	0.413	0.0172	0.0172	0.0208	0.0231							

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER OFFSET FIELD CALIF. *** PRELIMINARY DATA ***

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER JOFFETT FIELD (CALIF.) *** PRELIMINARY DATA *** TEST NO. 195									
MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.		
5.22	4.1532E 06	8.1651E 05	0.197	6.93	736.7	0.75394E 06	195		
PACH	RE/FT	REL LENGTH(FT)	PT(PST)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	RUN NO.		
5.22	1.2659E 06	8.1651E 05	0.645	101.92	1326.0	0.0060	17		
CHAN	T/C	TWIDEG K)	TWIDEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.850)	TIME(SEC)
1	1	317.3	571.2	5.106	4.499	60.494	53.304	4.1486E-03	0.536
2	2	316.7	570.1	2.468	2.175	60.581	53.380	2.0019E-03	0.530
3	3	316.2	569.2	2.145	1.890	60.656	53.446	1.7379E-03	0.451
4	4	315.4	567.7	1.92	1.755	60.778	53.553	1.6095E-03	0.448
5	5	314.8	566.7	1.834	1.616	60.858	53.625	1.4799E-03	0.461
6	6	314.1	565.4	1.407	1.240	60.963	53.716	1.1334E-03	0.457
7	7	313.3	564.0	1.149	1.012	61.070	53.811	9.2341E-04	0.446
8	8	312.2	561.9	0.926	0.816	61.240	53.961	7.4191E-04	0.451
9	9	311.0	559.9	0.679	0.599	61.403	54.105	5.4251E-04	0.469
10	10	310.2	558.4	0.590	0.519	61.518	54.206	4.6973E-04	0.432
11	11	309.2	556.5	0.585	0.516	61.673	54.342	4.6508E-04	0.442
12	12	307.8	554.0	0.560	0.493	61.876	54.521	4.4302E-04	0.423
13	13	310.1	558.1	0.954	0.840	61.543	54.228	7.5936E-04	0.324
14	14	305.6	550.1	0.305	0.269	62.187	54.795	2.3995E-04	0.458
15	15	305.7	550.2	0.617	0.544	62.179	54.788	4.8580E-04	0.463
16	16	308.1	554.5	1.006	0.886	61.834	54.484	7.9648E-04	0.453
17	17	309.5	557.0	0.742	0.654	61.629	54.303	5.8997E-04	0.453
18	18	310.3	558.6	1.058	0.932	61.508	54.197	8.4338E-04	0.383
19	19	306.1	550.9	0.844	0.744	62.119	54.735	6.6488E-04	0.434
20	20	308.4	555.2	1.066	0.939	61.779	54.435	8.4508E-04	0.444
21	21	305.8	550.4	1.064	0.938	62.163	54.774	8.3788E-04	0.445
22	22	307.3	553.1	0.946	0.833	61.949	54.586	7.4735E-04	0.434
23	23	308.3	555.0	1.129	0.995	61.793	54.448	8.9518E-04	0.436
24	24	309.6	557.3	0.877	0.772	61.608	54.285	6.9723E-04	0.448
25	25	310.6	559.1	1.068	0.941	61.463	54.157	8.5160E-04	0.402
26	26	311.7	561.0	2.862	2.521	61.309	54.021	2.2891E-03	0.391
27	27	312.1	561.8	5.167	4.552	61.249	53.968	4.1377E-03	0.366
28	28	310.0	557.9	9.814	8.648	61.559	54.242	7.8135E-03	0.367
29	29	306.2	551.2	1.256	1.107	62.099	54.717	9.8992E-04	0.426
30	30	306.4	551.5	1.507	1.328	62.071	54.693	1.1880E-03	0.445
31	31	307.4	553.4	1.417	1.249	61.925	54.564	1.1205E-03	0.442
32	32	308.4	555.1	1.194	1.052	61.789	54.444	9.4613E-04	0.398
33	33	309.8	557.7	0.896	0.790	61.575	54.256	7.1342E-04	0.417
34	34	298.3	537.0	0.000	0.000	63.237	55.720	0.0000	0.277
35	35	306.7	552.0	2.082	1.834	62.032	54.658	1.6427E-03	0.442
36	36	307.8	554.1	1.902	1.676	61.869	54.515	1.5056E-03	0.437
37	37	308.7	555.6	1.455	1.282	61.743	54.404	1.1542E-03	0.399
38	38	309.9	557.8	1.061	0.935	61.379	54.252	8.4440E-04	0.398
39	39	311.2	560.2	1.064	0.937	61.379	54.083	8.4986E-04	0.415
40	40	308.1	552.1	2.204	1.942	62.025	54.653	1.1497E-03	0.456
41	41	306.1	551.0	2.192	1.932	62.113	54.730	1.1273E-03	0.447

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

43	50	507.6	555.7	2.244	1.977	61.904	54.546	1.753E-03	1.4622E-03	0.411
44	51	308.7	555.7	1.654	1.458	61.738	54.400	1.3126E-03	1.1021E-03	0.407
45	52	309.7	557.4	1.243	1.095	61.600	54.278	9.8905E-04	1.7621E-03	0.441
46	53	306.6	551.9	2.007	1.768	62.051	54.675	1.5829E-03	1.5242E-03	0.406
47	54	307.0	552.5	1.734	1.528	61.991	54.622	1.3690E-03	2.1351E-03	0.442
48	55	307.9	554.2	2.421	2.134	61.860	54.507	1.9172E-03	1.7860E-03	0.424
49	56	308.7	555.7	2.021	1.781	61.739	54.400	1.6033E-03	1.5260E-03	0.389
50	57	309.8	557.6	1.721	1.516	61.583	54.263	1.2694E-03	2.6596E-03	0.385
51	58	310.9	559.6	1.248	1.100	61.422	54.121	9.8643E-04	4.9532E-03	0.371
52	59	311.9	561.5	2.980	2.625	61.273	53.990	2.3851E-03	8.7102E-03	0.367
53	60	312.6	562.6	5.538	4.880	61.180	53.908	4.4410E-03	1.6582E-03	0.402
54	61	311.2	560.1	9.780	8.618	61.381	54.085	7.8130E-03	3.5426E-03	0.424
55	62	307.0	552.6	1.886	1.662	61.989	54.621	1.4893E-03	5.4898E-03	0.431
56	63	308.3	555.0	2.429	2.140	61.797	54.451	1.9251E-03	6.7430E-03	0.426
57	64	309.0	556.2	2.513	2.214	61.700	54.366	1.9952E-03	6.3087E-03	0.400
58	65	310.0	558.0	2.238	1.972	61.553	54.237	1.7823E-03	4.3239E-03	0.364
59	66	307.4	553.4	2.671	2.354	61.921	54.561	2.1122E-03	7.8544E-03	0.435
60	67	308.7	555.6	3.305	2.913	61.744	54.405	2.6224E-03	9.4047E-03	0.396
61	68	309.3	556.7	3.089	2.722	61.655	54.327	2.4550E-03	8.6455E-03	0.363
62	69	310.9	559.5	2.103	1.853	61.429	54.127	1.6783E-03	9.8996E-03	0.451
63	70	308.3	554.2	4.018	3.541	61.860	54.507	3.1810E-03	9.9074E-03	0.400
64	71	309.3	555.9	5.039	4.440	61.724	54.387	3.9997E-03	1.2014E-02	0.367
65	72	307.9	556.8	4.359	3.841	61.646	54.319	3.4644E-03	5.7460E-03	0.336
66	73	309.5	557.2	6.226	5.486	61.852	54.500	4.9293E-03		
67	74	310.0	558.0	7.610	6.705	61.620	54.295	6.0516E-03		
68	75	311.6	560.9	7.110	6.265	61.553	54.236	5.6610E-03		
69	76	308.6	555.5	4.961	4.372	61.323	54.034	3.9678E-03		
70	77	310.0	558.0	8.889	7.832	61.753	54.413	7.0511E-03		
71	78	310.6	559.1	10.599	9.339	61.555	54.239	8.4393E-03		
72	79	309.3	556.8	9.726	8.570	61.464	54.158	7.7574E-03		
73	80	310.8	559.5	11.179	9.850	61.647	54.320	8.8851E-03		
74	81	311.2	560.1	11.137	9.813	61.433	54.131	8.8879E-03		
75	82	312.3	562.2	13.492	11.888	61.384	54.088	1.0777E-02		
				6.429	5.665	61.215	53.939	5.1523E-03		

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.1782E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AEROSPACE RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	
5.22	3.302E 06	6.5037E 05	0.197	6.53	818.0	0.84239E 06	0.0018	195	
MACH	RE/FT	REL	LENGTH(FT)	PT(PST)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	RUN NO.	
5.22	1.0083E 06	6.5037E 05	0.645	95.94	1472.4	362.25	0.0060	18	
CHAN	T/C	W/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	W/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.357	0.0098	0.0117	39	42	0.355	0.0131	0.0155
2	2	0.357	0.0150	0.0177	40	43	0.356	0.0187	0.0222
3	3	0.357	0.0211	0.0250	41	44	0.355	0.0115	0.0136
4	4	0.358	0.0239	0.0283	42	45	0.356	0.0132	0.0156
5	5	0.357	0.0262	0.0310	43	46	0.357	0.0233	0.0276
6	6	0.357	0.0292	0.0346	44	47	0.356	0.0268	0.0317
7	7	0.357	0.0336	0.0398	45	48	0.354	0.0062	0.0074
8	8	0.357	0.0372	0.0441	46	50	0.357	0.1115	0.1321
9	9	0.000	0.0000	0.0000	47	51	0.356	0.1055	0.1249
10	10	0.356	0.0432	0.0511	48	53	0.357	0.0719	0.0852
11	11	0.356	0.0397	0.0470	49	55	0.356	0.0862	0.1021
12	12	0.356	0.0548	0.0649	50	57	0.357	0.1105	0.1309
13	13	0.356	0.1174	0.1390	51	59	0.357	0.2300	0.2723
14	14	0.356	0.2463	0.2916	52	60	0.357	0.1468	0.1738
15	15	0.356	0.1098	0.1309	53	61	0.357	0.1638	0.1939
16	16	0.355	0.0345	0.0408	54	65	0.358	0.1639	0.1941
17	17	0.356	0.0414	0.0490	55	68	0.358	0.1912	0.2265
18	18	0.356	0.0462	0.0547	56	69	0.358	0.2045	0.2423
19	20	0.357	0.0858	0.1015	57	70	0.358	0.2134	0.2528
20	22	0.356	0.1636	0.1937	58	72	0.359	0.2747	0.3254
21	24	0.355	0.0358	0.0423	59	73	0.355	0.0063	0.0075
22	25	0.355	0.0403	0.0477	60	74	0.355	0.0058	0.0069
23	26	0.404	0.0000	0.0000	61	75	0.354	0.0046	0.0054
24	27	0.356	0.0246	0.0291	62	76	0.355	0.0038	0.0045
25	28	0.356	0.0475	0.0562	63	77	0.356	0.0109	0.0129
26	29	0.355	0.0093	0.0110	64	78	0.356	0.0067	0.0079
27	30	0.355	0.0194	0.0229	65	79	0.356	0.0075	0.0088
28	31	0.356	0.0488	0.0578	66	80	0.357	0.0039	0.0046
29	32	0.355	0.0118	0.0139	67	81	0.358	0.0551	0.0652
30	34	0.355	0.0544	0.0644	68	82	0.358	0.0147	0.0174
31	33	0.355	0.0191	0.0225	69	83	0.358	0.0073	0.0087
32	35	0.355	0.0094	0.0112	70	84	0.358	0.0110	0.0130
33	36	0.354	0.0058	0.0068	71	85	0.357	0.0094	0.0112
34	37	0.351	0.0000	0.0000	72	86	0.358	0.0100	0.0119
35	38	0.355	0.0094	0.0111	73	87	0.360	0.0326	0.0387
36	39	0.355	0.0056	0.0066	74	88	0.363	0.0264	0.0314
37	40	0.356	0.0102	0.0121	75	89	0.363	0.0461	0.0547
38	41	0.356	0.0108	0.0130				0.0461	0.0603

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 18

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEC K)	HT(JOULE/KG)	RS(METER)	TEST NO.
5.22	3.3082E 06	6.5037E 05	0.197	6.53	818.0	0.84239E 06	0.0018	195
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEC R)	HT(BTU/LBM)	RS(FT)	RUN NO.
5.22	1.0083E 06	6.5037E 05	0.645	95.94	1472.4	362.25	0.0060	18

CHAN	T/C	TIME(SEC)	ST(0.850)	ST(0.900)	QS(BTU/FT2-SEC)	QS(W/CM2)	Q(BTU/FT2-SEC)	Q(W/CM2)	PT(PSI)	TT(DEC R)	HT(BTU/LBM)	RS(FT)
1	1	299.7	539.4	0.639	73.633	64.881	5.2469E-04	5.7793E-04	0.406			
2	2	299.5	539.1	0.971	73.662	64.906	7.9728E-04	8.7815E-04	0.494			
3	3	299.7	539.5	1.372	73.629	64.877	1.1272E-03	1.2416E-03	0.528			
4	4	299.9	539.8	1.551	73.607	64.858	1.2746E-03	1.4040E-03	0.563			
5	5	299.8	539.6	1.697	73.623	64.871	1.3946E-03	1.5362E-03	0.536			
6	6	299.8	539.6	1.893	73.622	64.871	1.5553E-03	1.7132E-03	0.530			
7	7	299.6	539.3	2.183	73.646	64.893	1.7928E-03	1.9747E-03	0.544			
8	8	299.1	538.4	2.418	73.712	64.950	1.9838E-03	2.1848E-03	0.548			
9	9	0.0	0.0	0.000	0.000	0.000	0.0000	0.0000	-0.000			
10	10	298.7	537.6	2.808	73.776	65.007	2.3020E-03	2.5350E-03	0.572			
11	11	298.4	537.2	2.585	73.811	65.038	2.1175E-03	2.3318E-03	0.510			
12	12	298.3	537.0	3.567	73.830	65.054	2.9217E-03	3.2173E-03	0.510			
13	13	298.3	537.0	7.639	73.830	65.054	6.2566E-03	6.8894E-03	0.524			
14	14	298.2	536.8	16.028	73.839	65.062	1.3125E-02	1.4453E-02	0.556			
15	15	298.5	537.3	7.143	73.803	65.030	5.8525E-03	6.4448E-03	0.593			
16	16	297.8	536.1	2.246	73.896	65.112	1.8374E-03	2.0230E-03	0.165			
17	17	298.3	536.9	2.694	73.836	65.060	2.2060E-03	2.4291E-03	0.241			
18	18	298.5	537.3	3.002	73.802	65.030	2.4599E-03	2.7088E-03	0.385			
19	20	299.2	538.6	5.569	73.700	64.939	4.5705E-03	5.0338E-03	0.412			
20	22	299.0	538.1	10.627	73.737	64.972	8.7163E-03	9.5993E-03	0.440			
21	24	297.8	536.1	2.328	73.857	65.114	1.9049E-03	2.0973E-03	0.435			
22	25	298.0	536.5	2.625	73.867	65.087	2.1486E-03	2.3658E-03	0.385			
23	26	338.8	609.9	0.000	0.000	0.000	0.0000	0.0000	*****			
24	27	298.2	536.8	1.598	73.842	65.064	1.3088E-03	1.4411E-03	0.550			
25	28	298.4	537.2	3.087	73.814	65.040	2.5290E-03	2.7849E-03	0.494			
26	29	297.9	536.2	0.604	73.889	65.106	4.9448E-04	5.4444E-04	0.500			
27	30	298.0	536.4	1.261	73.874	65.093	1.0323E-03	1.1366E-03	0.527			
28	31	298.2	536.8	3.175	73.845	65.068	2.5996E-03	2.8625E-03	0.432			
29	32	298.1	536.6	0.765	73.859	65.079	6.2616E-04	6.8946E-04	0.610			
30	34	298.1	536.6	3.542	73.857	65.078	2.8994E-03	3.1925E-03	0.454			
31	33	297.6	535.7	1.241	73.927	65.140	1.0150E-03	1.1175E-03	0.605			
32	35	297.5	535.6	0.616	73.940	65.151	5.0339E-04	5.5421E-04	0.538			
33	36	297.3	535.1	0.376	73.980	65.186	3.0739E-04	3.3840E-04	0.498			
34	37	294.6	530.3	0.000	0.000	0.000	0.0000	0.0000	-11.997			
35	38	297.5	535.6	0.610	73.940	65.151	4.9879E-04	5.4915E-04	0.494			
36	39	297.7	535.9	0.366	73.913	65.128	2.9926E-04	3.2948E-04	0.570			
37	40	298.5	537.5	0.666	73.783	65.013	5.4575E-04	6.0099E-04	0.584			
38	41	298.8	537.9	0.712	73.758	64.991	5.8341E-04	6.4249E-04	0.558			
39	42	297.5	535.5	0.852	73.946	65.157	6.9684E-04	7.6719E-04	0.618			
40	43	298.3	537.0	1.218	73.826	65.051	9.9786E-04	1.0980E-03	0.522			
41	44	297.6	535.7	0.749	73.926	65.139	6.1236E-04	6.7419E-04	0.529			

42	45	298.8	531.8	0.972	0.857	73.761	64.994	7.0224E-04	7.7335E-04	0.441
43	46	299.7	539.5	1.718	1.514	73.628	64.876	1.2438E-03	1.3700E-03	0.393
44	47	298.3	536.9	1.975	1.740	73.831	65.055	1.4253E-03	1.5694E-03	0.388
45	48	297.2	535.0	0.462	0.407	73.988	65.193	3.3273E-04	3.6630E-04	0.445
46	50	299.1	538.4	8.222	7.245	73.719	64.957	5.9437E-03	6.5460E-03	0.272
47	51	298.9	538.1	7.782	6.857	73.743	64.977	5.6236E-03	6.1932E-03	0.374
48	53	299.1	538.3	5.303	4.672	73.720	64.957	3.8332E-03	4.2216E-03	0.296
49	55	299.0	538.2	6.359	5.603	73.733	64.969	4.5959E-03	5.0615E-03	0.351
50	57	299.2	538.6	8.148	7.179	73.702	64.942	5.8914E-03	6.4886E-03	0.377
51	59	299.2	538.6	16.951	14.936	73.697	64.937	1.2258E-02	1.3501E-02	0.302
52	60	299.3	538.7	10.819	9.533	73.692	64.932	7.8241E-03	8.6173E-03	0.206
53	61	299.6	539.3	12.059	10.626	73.643	64.890	8.7279E-03	9.6135E-03	0.289
54	65	299.9	539.8	12.060	10.627	73.605	64.856	8.7337E-03	9.6205E-03	0.336
55	68	300.4	540.8	14.057	12.386	73.529	64.789	1.0192E-02	1.1228E-02	0.200
56	69	300.6	541.1	15.032	13.245	73.503	64.766	1.0903E-02	1.2022E-02	0.233
57	70	300.6	541.1	15.682	13.818	73.501	64.765	1.1375E-02	1.2512E-02	0.259
58	72	301.1	541.9	20.172	17.774	73.440	64.711	1.4645E-02	1.6136E-02	0.260
59	73	297.6	535.8	0.468	0.412	73.925	65.138	3.3709E-04	3.7113E-04	0.501
60	74	297.6	535.6	0.432	0.380	73.936	65.148	3.1103E-04	3.4243E-04	0.419
61	75	297.3	535.1	0.340	0.300	73.975	65.182	2.4481E-04	2.6951E-04	0.393
62	76	297.7	535.8	0.278	0.245	73.921	65.135	2.5045E-04	2.7069E-04	0.519
63	77	298.9	538.0	0.803	0.707	73.747	64.981	5.7991E-04	6.3865E-04	0.512
64	78	298.7	537.6	0.493	0.435	73.776	64.984	3.5624E-04	3.9231E-04	0.511
65	79	298.9	538.0	0.550	0.485	73.750	64.984	3.9745E-04	4.3771E-04	0.592
66	80	299.3	538.8	0.284	0.250	73.682	64.924	2.0523E-04	2.2604E-04	0.638
67	81	300.5	540.9	4.048	3.566	73.515	64.776	2.9352E-03	3.2337E-03	0.431
68	82	300.3	540.5	1.079	0.951	73.550	64.807	7.8231E-04	8.6182E-04	0.645
69	83	300.4	540.8	0.539	0.475	73.529	64.789	3.9053E-04	4.3023E-04	0.567
70	84	300.6	541.1	0.809	0.713	73.500	64.764	5.8663E-04	6.4630E-04	0.757
71	85	299.5	539.1	0.694	0.612	73.663	64.907	5.0232E-04	5.5327E-04	0.583
72	86	300.3	540.5	0.736	0.649	73.551	64.809	5.3369E-04	5.8792E-04	0.463
73	87	301.8	543.2	2.392	2.108	73.333	64.616	1.7395E-03	1.9169E-03	0.651
74	88	304.2	547.6	1.930	1.700	72.991	64.315	1.4110E-03	1.5557E-03	0.495
75	89	304.8	548.7	3.361	2.962	72.901	64.235	2.4611E-03	2.7149E-03	0.484

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9246E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***
 MACH 5.22 RE/METER REL LENGTH(METER) PT(ATM) TT(DEG K) HT(JOULE/KG) RS(METER) TEST NO. 195
 3.1036E 06 6.1114E 05 0.197 -6.84 874.7 0.90490E 06 0.0018 RUN NO. 19
 5.22 9.4750E 05 6.1114E 05 0.665 100.56 1574.5 389.13 RS(FT) 0.0060
 ORB SATED
 $\alpha = 120^\circ, \beta = 0^\circ$

CASE	T/C	H/HT	G/OS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HM/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.339	0.0155	0.0183	0.0201	0.0217	39	42	0.336	0.0419	0.0419	0.0419	0.0419
2	2	0.335	0.0205	0.0241	0.0265	0.0297	40	43	0.337	0.0522	0.0522	0.0522	0.0541
3	3	0.340	0.0252	0.0297	0.0326	0.0366	41	44	0.336	0.0039	0.0039	0.0039	0.0046
4	4	0.340	0.0238	0.0280	0.0308	0.0346	42	45	0.338	0.0039	0.0039	0.0039	0.0050
5	5	0.340	0.0240	0.0283	0.0311	0.0346	43	46	0.339	0.0224	0.0224	0.0224	0.0264
6	6	0.340	0.0235	0.0277	0.0304	0.0336	44	47	0.338	0.0346	0.0346	0.0346	0.0447
7	7	0.340	0.0256	0.0301	0.0331	0.0366	45	48	0.336	0.0396	0.0396	0.0396	0.0435
8	8	0.339	0.0281	0.0331	0.0364	0.0400	46	49	0.337	0.0060	0.0060	0.0060	0.0077
9	9	0.376	0.0000	0.0000	0.0000	0.0000	50	51	0.337	0.0953	0.0953	0.0953	0.1122
10	10	0.339	0.0416	0.0490	0.0538	0.0593	51	52	0.337	0.1040	0.1040	0.1040	0.1231
11	11	0.338	0.0713	0.0839	0.0921	0.0997	52	53	0.337	0.1225	0.1225	0.1225	0.1344
12	12	0.338	0.1072	0.1262	0.1386	0.1511	53	54	0.337	0.0734	0.0734	0.0734	0.0864
13	13	0.338	0.1194	0.1386	0.1511	0.1636	54	55	0.337	0.1158	0.1158	0.1158	0.0949
14	14	0.337	0.2257	0.2559	0.2818	0.3066	55	56	0.338	0.2681	0.2681	0.2681	0.1497
15	15	0.338	0.1740	0.2049	0.2249	0.2419	56	57	0.338	0.2602	0.2602	0.2602	0.3467
16	16	0.336	0.0237	0.0279	0.0306	0.0342	57	58	0.339	0.1087	0.1087	0.1087	0.3365
17	17	0.337	0.0345	0.0407	0.0446	0.0486	58	59	0.338	0.1280	0.1280	0.1280	0.1405
18	18	0.337	0.0754	0.0888	0.0974	0.1065	59	60	0.338	0.1425	0.1425	0.1425	0.1678
19	19	0.338	0.1030	0.1213	0.1332	0.1467	60	61	0.339	0.3251	0.3251	0.3251	0.1842
20	20	0.338	0.1368	0.1567	0.1730	0.1888	61	62	0.342	0.2635	0.2635	0.2635	0.4206
21	21	0.337	0.0400	0.0471	0.0517	0.0566	62	63	0.340	0.1752	0.1752	0.1752	0.3413
22	22	0.337	0.0515	0.0606	0.0666	0.0727	63	64	0.340	0.2191	0.2191	0.2191	0.2267
23	23	0.376	0.0000	0.0000	0.0000	0.0000	64	65	0.343	0.6415	0.6415	0.6415	0.2835
24	24	0.337	0.0479	0.0564	0.0619	0.0678	65	66	0.336	0.0061	0.0061	0.0061	0.8312
25	25	0.337	0.0824	0.0970	0.1065	0.1160	66	67	0.336	0.0072	0.0072	0.0072	0.0079
26	26	0.337	0.0218	0.0257	0.0282	0.0317	67	68	0.336	0.0076	0.0076	0.0076	0.0099
27	27	0.337	0.0231	0.0272	0.0298	0.0333	68	69	0.336	0.0059	0.0059	0.0059	0.0076
28	28	0.337	0.0391	0.0461	0.0506	0.0556	69	70	0.336	0.0052	0.0052	0.0052	0.0067
29	29	0.337	0.0135	0.0159	0.0175	0.0191	70	71	0.337	0.0050	0.0050	0.0050	0.0065
30	30	0.337	0.0124	0.0146	0.0160	0.0175	71	72	0.338	0.0038	0.0038	0.0038	0.0050
31	31	0.336	0.0102	0.0120	0.0132	0.0146	72	73	0.339	0.0046	0.0046	0.0046	0.0050
32	32	0.336	0.0067	0.0078	0.0086	0.0096	73	74	0.340	0.0054	0.0054	0.0054	0.0059
33	33	0.336	0.0054	0.0064	0.0070	0.0078	74	75	0.340	0.0041	0.0041	0.0041	0.0044
34	34	0.329	0.0300	0.0343	0.0370	0.0400	75	76	0.340	0.0171	0.0171	0.0171	0.0222
35	35	0.336	0.0054	0.0064	0.0070	0.0078	76	77	0.340	0.0058	0.0058	0.0058	0.0075
36	36	0.336	0.0176	0.0208	0.0228	0.0258	77	78	0.341	0.0052	0.0052	0.0052	0.0067
37	37	0.337	0.0230	0.0271	0.0298	0.0333	78	79	0.344	0.0152	0.0152	0.0152	0.0197
38	38	0.337	0.0046	0.0054	0.0059	0.0066	79	80	0.348	0.0076	0.0076	0.0076	0.0098
39	39	0.337	0.0046	0.0054	0.0059	0.0066	80	81	0.348	0.0415	0.0415	0.0415	0.0538
40	40	0.337	0.0046	0.0054	0.0059	0.0066	81	82	0.348	0.0834	0.0834	0.0834	0.1081
41	41	0.337	0.0046	0.0054	0.0059	0.0066	82	83	0.349	0.0271	0.0271	0.0271	0.0352
42	42	0.337	0.0046	0.0054	0.0059	0.0066	83	84	0.349	0.0283	0.0283	0.0283	0.0368

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 19

ATMOSPHERIC AERONAUTICS AND SPACE										RUN NO. 19	
WACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TT(DEG K)	HT(JOULE/KG)	RS(FT)	
5.22	3.1086E 06	6.1114E 05	0.197	6.84	874.7	0.20490E 06	0.0018	874.7	0.20490E 06	0.0018	
WACH	RE/FT	REL	LENGTH(FT)	PT(PST)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	9.4750E 05	6.1114E 05	0.645	100.56	1574.5	389.13	0.0060	1574.5	389.13	0.0060	
CHAN	T/C	TIME(SEC)	TIME(SEC)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST10.850)	ST10.900)	TIME(SEC)	
1	1	305.7	550.3	1.294	1.141	83.434	73.517	8.4185E-04	9.2428E-04	0.564	
2	2	305.7	550.3	1.708	1.505	83.436	73.519	1.1107E-03	1.2154E-03	0.615	
3	3	306.2	551.1	2.100	1.850	83.371	73.461	1.3668E-03	1.5007E-03	0.649	
4	4	306.5	551.7	1.982	1.746	83.324	73.420	1.2906E-03	1.4171E-03	0.653	
5	5	306.3	551.4	2.001	1.763	83.348	73.441	1.3028E-03	1.4306E-03	0.651	
6	6	306.4	551.5	1.960	1.727	83.338	73.432	1.2765E-03	1.4017E-03	0.641	
7	7	306.3	551.3	2.130	1.877	83.359	73.450	1.3869E-03	1.5228E-03	0.644	
8	8	305.7	550.2	2.346	2.067	83.448	73.529	1.5255E-03	1.6749E-03	0.649	
9	9	338.8	609.9	0.000	0.000	78.601	69.259	0.0000	0.0000	*****	
10	10	305.1	549.2	3.472	3.060	83.530	73.601	2.2553E-03	2.4758E-03	0.673	
11	11	304.5	548.0	5.960	5.251	83.621	73.682	3.8659E-03	4.2434E-03	0.667	
12	12	304.1	547.5	8.968	7.902	83.670	73.725	5.8134E-03	6.3806E-03	0.664	
13	13	304.2	547.5	15.013	13.228	83.664	73.719	9.7332E-03	1.0683E-02	0.651	
14	14	304.0	547.2	18.891	16.647	83.654	73.746	1.2244E-02	1.3438E-02	0.653	
15	15	304.3	547.7	14.554	12.824	83.651	73.708	9.4374E-03	1.0358E-02	0.662	
16	16	303.2	545.7	1.987	1.751	83.814	73.852	1.2855E-03	1.4107E-03	0.419	
17	17	303.4	546.2	2.893	2.549	83.771	73.813	1.8726E-03	2.0551E-03	0.466	
18	18	303.5	546.3	6.313	5.563	83.760	73.803	4.0878E-03	4.4861E-03	0.563	
19	19	304.3	547.7	8.616	7.592	83.647	73.704	5.5875E-03	6.1329E-03	0.537	
20	20	304.6	548.1	33.169	29.226	83.601	73.664	2.1522E-02	2.3624E-02	0.514	
21	21	303.3	545.9	3.354	2.955	83.795	73.834	2.1705E-03	2.3819E-03	0.484	
22	22	303.5	546.3	4.314	3.801	83.765	73.808	2.7930E-03	3.0652E-03	0.560	
23	23	338.8	609.9	0.000	0.000	78.601	69.259	0.0000	0.0000	*****	
24	24	303.7	546.7	4.013	3.536	83.732	73.779	2.5956E-03	2.8530E-03	0.438	
25	25	303.7	546.7	6.897	6.077	83.732	73.779	4.4671E-03	4.9026E-03	0.576	
26	26	303.5	546.2	1.830	1.612	83.773	73.812	1.1847E-03	1.3002E-03	0.667	
27	27	303.4	546.2	1.932	1.703	83.773	73.816	1.2509E-03	1.3728E-03	0.558	
28	28	303.5	546.3	3.279	2.889	83.760	73.803	2.1228E-03	2.3296E-03	0.453	
29	29	303.6	546.4	1.133	0.999	83.754	73.798	7.3386E-04	8.0537E-04	0.606	
30	30	303.5	546.3	1.038	0.914	83.760	73.804	6.7187E-04	7.3734E-04	0.600	
31	31	303.1	545.5	0.855	0.754	83.828	73.863	5.5328E-04	6.0714E-04	0.527	
32	32	302.9	545.3	0.558	0.492	83.844	73.878	3.6088E-04	3.9400E-04	0.611	
33	33	302.6	544.7	0.454	0.400	83.897	73.925	2.9361E-04	3.2216E-04	0.551	
34	34	296.8	534.2	0.000	0.000	84.752	74.678	0.0000	0.0000	1.751	
35	35	302.8	545.0	0.454	0.400	83.873	73.903	2.9369E-04	3.2226E-04	0.575	
36	36	302.8	545.0	1.479	1.303	83.873	73.903	9.5607E-04	1.0491E-03	0.656	
37	37	303.7	546.7	1.930	1.701	83.733	73.780	1.2501E-03	1.3719E-03	0.612	
38	38	303.7	546.7	0.383	0.337	83.684	73.737	2.4821E-04	2.7262E-04	0.588	
39	39	302.5	544.6	3.516	3.098	83.903	73.930	2.2724E-03	2.4933E-03	0.718	
40	40	302.5	546.1	4.375	3.855	83.777	73.819	2.8319E-03	3.1078E-03	0.587	
41	41	302.7	544.9	0.327	0.288	83.879	73.909	2.1133E-04	2.3189E-04	0.710	

43	45	334.4	548.0	1.876	1.653	83.628	73.687	1.2169E-03	1.3357E-03	0.687
44	46	305.3	549.5	2.888	2.544	83.506	73.580	1.8761E-03	2.0596E-03	0.597
45	47	304.1	547.4	2.814	2.479	83.476	73.730	1.8239E-03	2.0018E-03	0.596
46	48	303.5	546.3	0.503	0.443	83.997	73.925	3.2524E-04	3.5687E-04	0.558
47	49	303.3	546.0	7.981	7.032	83.766	73.808	5.1671E-03	5.6706E-03	0.521
48	50	303.7	546.6	8.717	7.681	83.787	73.828	5.6418E-03	6.1914E-03	0.550
49	51	303.9	547.1	9.697	8.545	83.738	73.784	3.9803E-03	4.3683E-03	0.499
50	52	304.7	548.4	22.410	19.746	83.701	73.752	6.2834E-03	6.8962E-03	0.541
51	53	305.3	548.5	21.724	19.142	83.591	73.655	1.4543E-02	1.5964E-02	0.563
52	54	305.8	549.7	9.097	8.016	83.503	73.578	1.4115E-02	1.5495E-02	0.493
53	55	304.2	547.5	11.920	10.503	83.714	73.763	5.8940E-03	6.4687E-03	0.426
54	56	305.8	550.4	27.123	23.899	83.662	73.718	7.7291E-03	8.4822E-03	0.522
55	57	307.9	554.3	21.903	19.300	83.428	73.511	1.7641E-02	1.9368E-02	0.581
56	58	306.0	550.7	14.612	12.875	83.114	73.235	1.4306E-02	1.5714E-02	0.342
57	59	306.6	551.9	18.251	16.081	83.401	73.488	9.5079E-03	1.0438E-02	0.445
58	60	308.7	555.7	53.248	46.918	83.302	73.407	1.1889E-02	1.3055E-02	0.512
59	61	302.6	544.7	0.514	0.453	83.002	73.136	3.4832E-02	3.8265E-02	0.590
60	62	302.8	545.0	0.640	0.564	83.854	73.922	3.3197E-04	3.6425E-04	0.521
61	63	302.7	544.8	0.491	0.433	83.868	73.899	4.1391E-04	4.5418E-04	0.550
62	64	303.7	546.7	0.436	0.384	83.887	73.916	3.1756E-04	3.4845E-04	0.606
63	65	304.0	547.1	0.420	0.370	83.732	73.779	2.8257E-04	3.1011E-04	0.643
64	66	304.3	547.7	0.321	0.283	83.656	73.748	2.7197E-04	2.9850E-04	0.490
65	67	305.1	549.1	0.382	0.336	83.650	73.707	2.0799E-04	2.2829E-04	0.512
66	68	306.6	551.9	0.744	0.303	83.534	73.604	2.5781E-04	2.7204E-04	0.698
67	69	306.1	550.9	1.428	1.258	83.307	73.405	2.2435E-04	2.4636E-04	0.734
68	70	306.6	551.9	0.484	0.427	83.388	73.476	9.2923E-04	1.0203E-03	0.573
69	71	307.5	553.5	0.430	0.379	83.309	73.306	3.1543E-04	3.4637E-04	0.659
70	72	308.7	555.7	1.263	1.113	83.175	73.288	2.8039E-04	3.0795E-04	0.623
71	73	305.8	550.5	0.632	0.556	82.994	73.129	8.2644E-04	9.0789E-04	0.890
72	74	307.5	553.6	3.453	3.043	83.423	73.507	4.1018E-04	4.5101E-04	0.579
73	75	310.0	558.0	6.906	6.085	83.171	73.285	2.2538E-03	2.4753E-03	0.577
74	76	313.6	564.4	2.233	1.968	82.814	72.970	4.5291E-03	4.9767E-03	0.605
75	77	314.8	566.7	2.322	2.046	82.287	72.506	1.4750E-03	1.6219E-03	0.519
76	78					82.108	72.348	1.5378E-03	1.6914E-03	0.437

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9303E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEC K)	HT(JOULE/KG)	PS(METER)	TEST NO.						
5.22	3.2314E 06	6.3529E 05	0.197	861.0	6.88973E 06	0.0018	20						
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEC R)	HT(FT/LBM)	PS(FT)	ET WATED						
5.22	9.8494E 05	6.3529E 05	0.645	1549.8	382.61 J	0.006C	$\alpha = 120^\circ, \delta = 0^\circ$						
CHAN	T/C	PM/HT	Q/QC	H/MS(1.000)	H/MS(0.900)	H/MS(0.850)	CHAN	T/C	PM/HT	Q/QC	H/MS(1.000)	H/MS(0.900)	H/MS(0.850)
1	1	0.344	0.0423	0.0423	0.0499	0.0549	39	51	0.344	0.0274	0.0274	0.0323	0.0355
2	2	0.345	0.0311	0.0311	0.0367	0.0404	40	54	0.344	0.0262	0.0262	0.0319	0.0339
3	3	0.345	0.0275	0.0275	0.0324	0.0354	41	55	0.343	0.0316	0.0316	0.0373	0.0400
4	4	0.344	0.0174	0.0174	0.0205	0.0225	42	56	0.343	0.0280	0.0280	0.0330	0.0363
5	5	0.344	0.0128	0.0128	0.0151	0.0166	43	57	0.343	0.0377	0.0377	0.0445	0.0499
6	6	0.344	0.0079	0.0079	0.0093	0.0103	44	53	0.343	0.0623	0.0623	0.0735	0.0807
7	7	0.343	0.0058	0.0058	0.0068	0.0075	45	60	0.343	0.0392	0.0392	0.0451	0.0491
8	8	0.343	0.0052	0.0052	0.0062	0.0068	46	61	0.344	0.0430	0.0430	0.0507	0.0557
9	9	0.343	0.0050	0.0050	0.0060	0.0065	47	62	0.343	0.0404	0.0404	0.0476	0.0521
10	10	0.343	0.0049	0.0049	0.0057	0.0063	48	63	0.343	0.0365	0.0365	0.0430	0.0471
11	11	0.343	0.0046	0.0046	0.0054	0.0060	49	64	0.343	0.0762	0.0762	0.0898	0.0988
12	12	0.343	0.0077	0.0077	0.0091	0.0100	50	65	0.344	0.0416	0.0416	0.0491	0.0540
13	13	0.343	0.0109	0.0109	0.0129	0.0142	51	66	0.344	0.0375	0.0375	0.0443	0.0496
14	14	0.343	0.0151	0.0151	0.0178	0.0195	52	67	0.344	0.0737	0.0737	0.0869	0.0955
15	15	0.343	0.0160	0.0160	0.0188	0.0207	53	68	0.344	0.1264	0.1264	0.1492	0.1639
16	16	0.343	0.0200	0.0200	0.0234	0.0259	54	70	0.344	0.0592	0.0592	0.0767	0.0877
17	17	0.343	0.0199	0.0199	0.0235	0.0258	55	71	0.343	0.0517	0.0517	0.0610	0.0670
18	18	0.343	0.0153	0.0153	0.0180	0.0198	56	72	0.343	0.0472	0.0472	0.0557	0.0612
19	19	0.343	0.0155	0.0155	0.0182	0.0201	57	73	0.343	0.0690	0.0690	0.0814	0.0894
20	20	0.343	0.0224	0.0224	0.0264	0.0290	58	77	0.344	0.0790	0.0790	0.0932	0.1024
21	21	0.343	0.0140	0.0140	0.0165	0.0181	59	78	0.343	0.0738	0.0738	0.0871	0.0957
22	22	0.343	0.0183	0.0183	0.0216	0.0237	60	79	0.343	0.0793	0.0793	0.0936	0.1022
23	23	0.343	0.0264	0.0264	0.0311	0.0342	61	81	0.344	0.0815	0.0815	0.0961	0.1051
24	24	0.343	0.0276	0.0276	0.0326	0.0358	62	84	0.344	0.1031	0.1031	0.1216	0.1336
25	25	0.344	0.0166	0.0166	0.0195	0.0215	63	85	0.343	0.0971	0.0971	0.1146	0.1250
26	26	0.344	0.0400	0.0400	0.0472	0.0519	64	86	0.343	0.1214	0.1214	0.1432	0.1574
27	27	0.344	0.0694	0.0694	0.0819	0.0900	65	90	0.344	0.1307	0.1307	0.1542	0.1694
28	28	0.344	0.1249	0.1249	0.1474	0.1619	66	91	0.344	0.1198	0.1198	0.1413	0.1553
29	29	0.343	0.0127	0.0127	0.0149	0.0164	67	92	0.343	0.1675	0.1675	0.1976	0.2171
30	30	0.344	0.0127	0.0127	0.0150	0.0165	68	94	0.344	0.1030	0.1030	0.1216	0.1336
31	31	0.343	0.0212	0.0212	0.0250	0.0275	69	98	0.345	0.1513	0.1513	0.1786	0.1963
32	32	0.343	0.0334	0.0334	0.0394	0.0433	70	99	0.344	0.1731	0.1731	0.2042	0.2244
33	33	0.343	0.0310	0.0310	0.0366	0.0402	71	100	0.343	0.2142	0.2142	0.2527	0.2776
34	34	0.338	0.0000	0.0000	0.0000	0.0000	72	103	0.345	0.1647	0.1647	0.1944	0.2157
35	35	0.344	0.0216	0.0216	0.0255	0.0281	73	104	0.345	0.2056	0.2056	0.2427	0.2667
36	36	0.343	0.0233	0.0233	0.0275	0.0302	74	105	0.344	0.1200	0.1200	0.1416	0.1554
37	37	0.343	0.0387	0.0387	0.0456	0.0501	75	107	0.344	0.0472	0.0472	0.0558	0.0613
38	38	0.343	0.0450	0.0450	0.0531	0.0583							

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETZ FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 195
MACH 5.22 3.2314E 06 6.3529E 05 0.197 6.93 861.0 0.88973E 06 0.0018															PUN NO. 20
MACH 5.22 9.8494E 05 6.3529E 05 0.645 101.90 1549.8 382.61 0.0060															
CHAN	T/C	TIME(SEC)	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	REL	
1	1	306.1	551.0	3.457	3.046	81.740	72.024	2.258E-03	2.588E-03	2.4827E-03	0.633	0.590	0.590	0.590	
2	2	305.6	550.1	2.545	2.243	81.809	72.085	1.661E-03	1.825E-03	1.6123E-03	0.624	0.624	0.624	0.624	
3	3	305.3	549.6	2.249	1.982	81.854	72.124	1.4671E-03	1.671E-03	1.0191E-03	0.574	0.574	0.574	0.574	
4	4	304.9	548.8	1.423	1.254	81.920	72.182	6.848E-04	6.274E-04	4.648E-04	0.529	0.529	0.529	0.529	
5	5	304.5	548.1	1.051	0.926	81.972	72.228	4.230E-04	4.230E-04	3.3745E-04	0.477	0.477	0.477	0.477	
6	6	304.4	547.9	0.650	0.572	82.007	72.259	2.785E-04	2.785E-04	2.958E-04	0.406	0.406	0.406	0.406	
7	7	304.3	547.7	0.472	0.416	82.054	72.266	2.503E-04	2.503E-04	2.845E-04	0.402	0.402	0.402	0.402	
8	8	304.0	547.1	0.428	0.377	82.048	72.296	2.458E-04	2.458E-04	4.511E-04	0.369	0.369	0.369	0.369	
9	9	304.0	547.2	0.414	0.365	82.047	72.295	4.106E-04	4.106E-04	6.417E-04	0.372	0.372	0.372	0.372	
10	10	304.0	547.2	0.398	0.351	82.056	72.302	5.841E-04	5.841E-04	8.831E-04	0.480	0.480	0.480	0.480	
11	11	303.9	547.1	0.378	0.333	82.121	72.360	8.520E-04	8.520E-04	1.174E-03	0.607	0.607	0.607	0.607	
12	12	303.5	546.3	0.632	0.557	82.088	72.330	1.063E-03	1.063E-03	1.681E-03	0.551	0.551	0.551	0.551	
13	13	303.7	546.7	0.898	0.791	82.089	72.332	8.155E-04	8.155E-04	9.073E-04	0.501	0.501	0.501	0.501	
14	14	303.7	546.7	1.236	1.089	82.089	72.332	8.258E-04	8.258E-04	1.311E-03	0.582	0.582	0.582	0.582	
15	15	303.9	547.1	1.310	1.154	82.057	72.303	7.450E-04	7.450E-04	8.185E-04	0.522	0.522	0.522	0.522	
16	16	303.6	546.5	1.644	1.449	82.104	72.345	9.763E-04	9.763E-04	1.0727E-03	0.502	0.502	0.502	0.502	
17	17	304.1	547.4	1.736	1.440	82.034	72.283	1.407E-03	1.407E-03	1.545E-03	0.553	0.553	0.553	0.553	
18	18	304.1	547.4	1.253	1.106	82.033	72.282	1.473E-03	1.473E-03	1.618E-03	0.633	0.633	0.633	0.633	
19	19	304.2	547.6	1.269	1.118	82.016	72.267	8.841E-04	8.841E-04	9.713E-04	0.603	0.603	0.603	0.603	
20	20	303.8	546.8	1.835	1.617	82.085	72.328	2.136E-03	2.136E-03	2.347E-03	0.548	0.548	0.548	0.548	
21	21	304.1	547.3	1.145	1.009	82.041	72.289	3.705E-03	3.705E-03	4.072E-03	0.541	0.541	0.541	0.541	
22	22	303.9	547.1	1.501	1.322	82.059	72.305	6.684E-03	6.684E-03	7.327E-03	0.557	0.557	0.557	0.557	
23	23	303.9	547.0	2.163	1.906	82.061	72.207	6.760E-04	6.760E-04	7.527E-04	0.544	0.544	0.544	0.544	
24	24	304.3	547.7	2.263	1.994	82.005	72.258	6.800E-04	6.800E-04	7.471E-04	0.513	0.513	0.513	0.513	
25	25	304.4	547.9	1.358	1.196	81.987	72.241	1.431E-03	1.431E-03	1.242E-03	0.534	0.534	0.534	0.534	
26	26	304.7	548.4	3.279	2.889	81.950	72.209	1.782E-03	1.782E-03	1.958E-03	0.522	0.522	0.522	0.522	
27	27	304.7	548.4	5.689	5.013	91.948	72.207	1.657E-03	1.657E-03	1.821E-03	0.631	0.631	0.631	0.631	
28	28	304.9	548.8	10.231	9.015	81.920	72.182	0.0000	0.0000	0.0000	-1.492	-1.492	-1.492	-1.492	
29	29	304.3	547.7	1.038	0.915	82.005	72.258	1.155E-03	1.155E-03	1.259E-03	0.525	0.525	0.525	0.525	
30	30	304.4	547.9	1.044	0.920	81.992	72.246	1.245E-03	1.245E-03	1.368E-03	0.615	0.615	0.615	0.615	
31	31	304.0	547.2	1.738	1.532	82.051	72.298	2.063E-03	2.063E-03	2.268E-03	0.631	0.631	0.631	0.631	
32	32	303.8	546.9	2.741	2.415	82.076	72.320	2.401E-03	2.401E-03	2.638E-03	0.562	0.562	0.562	0.562	
33	33	304.3	547.7	2.546	2.243	82.004	72.257	1.467E-03	1.467E-03	1.607E-03	0.567	0.567	0.567	0.567	
34	34	304.3	539.3	0.000	0.000	82.696	72.866	1.259E-03	1.259E-03	1.368E-03	0.615	0.615	0.615	0.615	
35	35	304.6	548.3	1.774	1.563	81.962	72.219	2.063E-03	2.063E-03	2.268E-03	0.631	0.631	0.631	0.631	
36	36	304.2	547.5	1.913	1.686	82.020	72.271	2.638E-03	2.638E-03	2.847E-03	0.567	0.567	0.567	0.567	
37	37	303.9	547.0	3.172	2.795	82.068	72.313	1.467E-03	1.467E-03	1.607E-03	0.567	0.567	0.567	0.567	
38	38	304.3	547.7	3.689	3.250	82.005	72.258	1.259E-03	1.259E-03	1.368E-03	0.615	0.615	0.615	0.615	
39	39	304.8	548.6	2.244	1.978	81.933	72.194	1.467E-03	1.467E-03	1.607E-03	0.567	0.567	0.567	0.567	
40	40	304.7	548.6	2.145	1.890	81.949	72.208	1.259E-03	1.259E-03	1.368E-03	0.615	0.615	0.615	0.615	
41	41	304.2	547.5	2.591	2.283	82.021	72.272	2.638E-03	2.638E-03	2.847E-03	0.567	0.567	0.567	0.567	

42	56	303.9	546.7	3.095	2.277	82.068	72.313	2.0134E-03	1.5511E-03	0.517
43	57	303.9	547.0	3.095	2.277	82.068	72.313	2.0134E-03	1.5511E-03	0.517
44	58	303.9	546.9	5.111	4.523	82.071	72.316	2.0223E-03	2.4521E-03	0.540
45	59	304.2	547.5	3.135	2.762	82.313	72.270	2.0223E-03	2.4521E-03	0.540
46	60	304.5	548.1	3.523	3.104	81.974	72.230	2.0223E-03	2.4521E-03	0.540
47	61	304.5	546.4	3.317	2.822	82.114	72.354	2.0223E-03	2.4521E-03	0.540
48	62	303.5	546.6	2.996	2.640	82.096	72.337	1.6240E-03	2.0223E-03	0.540
49	63	304.0	547.3	6.249	5.506	82.041	72.289	4.0642E-03	4.4674E-03	0.507
50	64	304.4	547.9	3.415	3.309	81.991	72.246	2.0223E-03	2.4521E-03	0.540
51	65	304.5	548.1	7.075	2.709	81.973	72.230	2.0223E-03	2.4521E-03	0.540
52	66	304.5	548.1	6.034	5.320	81.973	72.232	3.9325E-03	4.3209E-03	0.537
53	67	304.9	548.9	10.356	9.125	81.911	72.174	6.7507E-03	7.4130E-03	0.561
54	68	304.5	548.1	4.853	4.276	81.977	72.233	3.1606E-03	3.4723E-03	0.504
55	69	304.0	547.2	4.245	3.740	82.050	72.297	2.7610E-03	3.0342E-03	0.537
56	70	303.7	546.7	3.975	3.415	82.089	72.332	2.5199E-03	2.7684E-03	0.565
57	71	304.1	547.4	5.660	4.988	82.023	72.282	3.6837E-03	4.0471E-03	0.570
58	72	304.5	548.2	6.473	5.704	81.970	72.227	4.2164E-03	4.6320E-03	0.594
59	73	304.1	547.3	6.056	5.336	82.039	72.288	3.9408E-03	4.3296E-03	0.563
60	74	303.9	547.0	6.510	5.736	82.068	72.313	4.2247E-03	4.6523E-03	0.594
61	75	304.5	548.0	6.630	5.986	81.980	72.236	4.3502E-03	4.7793E-03	0.573
62	76	304.7	548.4	8.446	7.442	81.946	72.205	5.5033E-03	6.0470E-03	0.569
63	77	303.9	547.1	8.971	7.024	82.058	72.304	5.1858E-03	5.6973E-03	0.574
64	78	303.7	546.6	9.970	8.785	82.094	72.336	6.4826E-03	7.1217E-03	0.538
65	79	304.7	548.5	10.709	9.436	81.944	72.203	6.9776E-03	7.6670E-03	0.592
66	80	304.3	547.8	9.823	8.655	82.001	72.254	6.3952E-03	7.0265E-03	0.587
67	81	303.7	546.7	13.751	12.116	82.089	72.331	8.9418E-03	9.8223E-03	0.555
68	82	304.7	548.5	8.443	7.439	81.939	72.199	5.5017E-03	6.0453E-03	0.555
69	83	305.3	549.5	12.389	10.216	81.862	72.132	8.0812E-03	8.8807E-03	0.533
70	84	304.4	547.9	14.191	12.504	81.988	72.243	9.2408E-03	1.0153E-02	0.558
71	85	304.0	547.2	17.574	15.485	82.046	72.293	1.1424E-02	1.2562E-02	0.525
72	86	305.6	550.1	19.477	11.875	81.809	72.085	8.7976E-03	9.6526E-03	0.513
73	87	305.3	549.5	16.834	14.833	81.861	72.130	1.0981E-02	1.2068E-02	0.537
74	88	304.5	548.1	9.838	8.569	81.975	72.231	6.4074E-03	7.0265E-03	0.514
75	89	305.1	549.2	3.872	3.412	81.885	72.152	2.5251E-03	2.7748E-03	0.527

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9757E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

WACH 5.22 3.3323E 06 6.6455E 05 0.197 6.92 836.4 0.86253E 06 0.0016 RS(METER) TEST NO. 195
WACH 5.22 1.0309E 06 6.6455E 05 0.645 101.74 1505.4 370.91 0.0060 RS(FT) RUN NO. 21

CHAN	T/C	TW(DEC N)	Ta(DEC R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	JS(BTU/CM2)	ST(0.900)	ST(0.650)	TIME(SEC)
1	1	307.9	554.2	1.714	1.510	77.453	68.282	1.1625E-03	1.2367E-03	0.758
2	2	307.5	553.4	2.382	2.099	77.554	68.335	1.6143E-03	1.7784E-03	0.543
3	3	307.6	553.7	3.099	2.731	77.531	68.315	2.1015E-03	2.3152E-03	0.576
4	4	307.5	553.5	4.402	3.879	77.548	68.330	2.9840E-03	3.2873E-03	0.643
5	5	307.1	552.8	5.326	4.692	77.604	68.380	3.6069E-03	3.5732E-03	0.656
6	6	307.5	553.4	7.625	6.718	77.554	68.335	5.1678E-03	5.6303E-03	0.584
7	7	307.7	553.8	9.720	8.565	77.525	68.310	6.5910E-03	7.2612E-03	0.677
8	8	307.5	553.5	11.614	10.233	77.550	68.332	7.8722E-03	8.6723E-03	0.689
9	9	307.6	553.8	12.765	11.248	77.528	68.313	8.6551E-03	9.5351E-03	0.708
10	10	307.6	553.7	14.828	13.066	77.534	68.318	1.0053E-02	1.1075E-02	0.680
11	11	307.3	553.2	17.934	15.803	77.571	68.350	1.2153E-02	1.3387E-02	0.678
12	12	306.7	552.1	19.667	17.330	77.663	68.431	1.3309E-02	1.4659E-02	0.647
13	13	307.9	554.4	2.322	2.046	77.450	68.279	1.5752E-03	1.7355E-03	0.687
14	14	306.5	551.8	5.246	4.622	77.689	68.455	3.5487E-03	3.5085E-03	0.640
15	15	306.4	551.4	4.941	4.354	77.717	68.479	3.3412E-03	3.6759E-03	0.670
16	16	307.8	554.0	10.044	8.850	77.512	68.298	6.8122E-03	7.5050E-03	0.576
17	17	308.1	554.6	8.471	7.464	77.457	68.250	5.7498E-03	6.3350E-03	0.638
18	18	307.8	554.0	3.495	3.079	77.512	68.298	2.3701E-03	2.6112E-03	0.706
19	19	306.5	551.7	5.311	4.680	77.699	68.463	3.5919E-03	3.9581E-03	0.677
20	20	307.8	554.0	11.631	10.251	77.504	68.292	7.6906E-03	8.6532E-03	0.665
21	21	306.1	550.9	4.702	4.143	77.758	68.515	3.1776E-03	3.4995E-03	0.695
22	22	307.4	553.3	6.509	5.735	77.568	68.348	4.4107E-03	4.8589E-03	0.733
23	23	307.9	554.2	10.834	9.546	77.450	68.279	7.3502E-03	8.0980E-03	0.691
24	24	308.2	554.7	6.569	5.551	77.453	68.247	5.8167E-03	6.4088E-03	0.702
25	25	307.9	554.2	3.610	3.181	77.494	68.283	2.4491E-03	2.6593E-03	0.693
26	26	307.5	553.5	0.992	0.874	77.548	68.330	6.7264E-04	7.4100E-04	0.661
27	27	306.7	552.1	0.379	0.334	77.660	68.429	2.5633E-04	2.8234E-04	0.591
28	28	304.8	548.6	0.472	0.416	77.951	68.685	3.1787E-04	3.4597E-04	0.573
29	29	306.0	550.8	3.508	3.091	77.770	68.526	2.3704E-03	2.6104E-03	0.687
30	30	305.9	550.6	2.617	2.306	77.786	68.540	1.7679E-03	1.9665E-03	0.670
31	31	307.0	552.4	3.477	3.064	77.621	68.395	2.3544E-03	2.5934E-03	0.713
32	32	307.6	553.6	5.360	4.647	77.538	68.322	6.3454E-03	6.5904E-03	0.679
33	33	308.0	554.4	7.981	7.036	77.479	68.270	5.4182E-03	5.9695E-03	0.695
34	34	300.4	540.8	0.000	0.000	0.000	0.000	0.0000	0.0000	-2.096
35	35	305.5	550.6	2.005	1.767	77.786	68.540	1.3542E-03	1.4913E-03	0.647
36	36	307.0	552.6	2.563	2.259	77.618	68.392	1.7357E-03	1.9119E-03	0.690
37	37	307.4	553.4	6.892	6.073	77.560	68.341	4.6708E-03	5.1454E-03	0.710
38	38	307.7	553.8	6.559	5.868	77.522	68.307	4.5166E-03	4.9788E-03	0.687
39	39	307.7	553.9	2.886	2.543	77.513	68.300	1.9575E-03	2.1566E-03	0.663
40	40	305.7	550.3	1.857	1.636	77.810	68.562	1.2588E-03	1.3808E-03	0.655
41	41	305.0	549.0	1.767	1.557	77.918	68.656	1.1916E-03	1.3119E-03	0.710

42	50	306.2	551.2	1.725	1.520	77.137	66.497	1.1603E-03	1.2645E-03	0.700
43	51	307.2	553.0	2.992	2.636	77.552	68.369	2.0208E-03	2.2327E-03	0.691
44	52	307.0	552.6	3.530	3.110	77.624	68.397	2.3902E-03	2.6328E-03	0.617
45	53	304.5	548.8	1.619	1.603	77.933	68.669	1.2263E-03	1.3501E-03	0.694
46	54	305.2	549.3	1.729	1.523	77.892	68.633	1.1658E-03	1.2826E-03	0.706
47	55	306.0	550.8	1.784	1.572	77.769	68.525	1.2055E-03	1.3276E-03	0.668
48	56	306.6	551.9	2.349	2.070	77.675	68.442	1.5892E-03	1.7504E-03	0.656
49	57	306.8	552.3	3.430	3.023	77.649	68.419	2.3219E-03	2.5575E-03	0.656
50	58	306.8	552.2	2.438	2.148	77.657	68.427	1.6497E-03	1.8171E-03	0.681
51	59	306.5	551.6	1.145	1.009	77.700	68.465	7.7416E-04	8.5265E-04	0.660
52	60	305.5	550.5	0.381	0.336	77.750	68.543	2.5751E-04	2.8359E-04	0.564
53	61	304.2	547.5	0.402	0.354	78.034	68.758	2.7059E-04	2.9788E-04	0.730
54	62	304.8	548.7	1.446	1.274	77.943	68.678	9.7478E-04	1.0732E-03	0.668
55	63	305.8	550.5	1.844	1.625	77.750	68.544	1.2456E-03	1.3717E-03	0.695
56	64	306.3	551.4	4.350	3.833	77.722	68.484	2.9411E-03	3.2322E-03	0.694
57	65	306.6	551.8	6.230	5.489	77.687	68.453	4.2143E-03	4.6416E-03	0.693
58	66	304.6	548.3	1.304	1.149	77.970	68.702	8.7856E-04	9.6725E-04	0.573
59	67	305.6	550.1	1.581	1.393	77.828	68.577	1.0673E-03	1.1733E-03	0.619
60	68	306.1	551.0	4.408	3.884	77.755	68.513	2.9789E-03	3.2806E-03	0.737
61	69	306.5	551.6	5.210	4.591	77.700	68.465	3.5239E-03	3.8812E-03	0.688
62	70	304.6	548.2	2.794	2.462	77.978	68.709	1.8820E-03	2.0720E-03	0.657
63	71	305.2	549.3	2.580	2.097	77.852	68.633	1.6053E-03	1.7676E-03	0.672
64	72	305.7	550.3	1.884	1.660	77.809	68.560	1.2722E-03	1.4010E-03	0.689
65	73	304.2	547.8	1.365	1.203	78.012	68.740	9.1895E-04	1.0117E-03	0.634
66	74	305.4	549.8	1.612	1.420	77.852	68.598	1.0879E-03	1.1979E-03	0.675
67	75	305.7	550.2	1.832	1.614	77.817	68.567	1.2366E-03	1.3617E-03	0.635
68	76	306.1	552.1	1.446	1.274	77.664	68.432	9.7821E-04	1.0775E-03	0.649
69	77	304.8	548.7	2.714	2.391	77.935	68.675	1.8291E-03	2.0139E-03	0.605
70	78	305.4	549.8	2.638	2.324	77.850	68.597	1.7803E-03	1.9604E-03	0.609
71	79	305.5	550.6	1.820	1.603	77.783	68.537	1.2292E-03	1.3537E-03	0.604
72	80	305.1	549.1	1.999	1.762	77.905	68.645	1.3482E-03	1.4845E-03	0.621
73	81	305.5	550.7	1.649	1.453	77.777	68.532	1.1137E-03	1.2245E-03	0.608
74	82	306.2	551.2	0.579	0.510	77.735	68.495	3.9110E-04	4.3073E-04	0.588
75	83	307.1	552.8	1.064	0.938	77.603	68.379	7.2082E-04	7.5402E-04	0.660

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0100E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH/METER	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.		
5.22	3.3017E-06	6.4910E-05	0.197	830.4	0.85594E-06	0.0018	195	22		
MACH	RE/FT	REL	LENGTH/FT	PT(Psi)	TT(DEG R)	HT(JTU/LB-M)	RS(FT)	TEST NO.		
5.22	1.0063E-06	6.4910E-05	0.645	98.12	1494.7	368.07	0.0060	22		
CHAN	T/C	TM(DEG K)	TM(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	OS(W/CM2)	OS(BTU/FT2-SEC)	ST(G.900)	ST(G.850)	TIME(SEC)
1	1	314.2	565.5	6.268	5.523	74.288	65.458	4.5039E-03	4.9719E-03	0.368
2	2	314.0	565.2	5.227	4.606	74.312	65.479	3.754E-03	4.1445E-03	0.374
3	3	314.5	566.1	5.208	4.589	74.244	65.419	12.7444E-03	4.1337E-03	0.349
4	4	314.6	566.4	4.740	4.177	74.223	65.401	3.4096E-03	3.7642E-03	0.353
5	5	314.7	566.4	4.272	3.764	74.220	65.398	3.0727E-03	3.3923E-03	0.356
6	6	314.4	565.9	3.740	3.295	74.256	65.429	2.6887E-03	2.9582E-03	0.345
7	7	314.2	565.5	3.299	2.907	74.289	65.458	2.3707E-03	2.6169E-03	0.358
8	8	313.6	564.5	2.953	2.602	74.371	65.531	2.1191E-03	2.3389E-03	0.359
9	9	313.0	563.3	2.346	2.067	74.464	65.613	1.812E-03	1.8553E-03	0.343
10	10	312.5	562.6	2.041	1.798	74.524	65.666	1.4609E-03	1.6121E-03	0.354
11	11	311.9	561.4	2.040	1.798	74.617	65.748	1.4585E-03	1.6091E-03	0.374
12	12	311.8	561.2	1.662	1.465	74.636	65.765	1.1881E-03	1.3108E-03	0.429
13	13	311.8	561.2	3.426	3.018	74.634	65.763	2.4485E-03	2.7013E-03	0.433
14	14	311.2	560.2	2.026	1.785	74.717	65.836	1.4464E-03	1.5956E-03	0.432
15	15	311.2	560.1	6.368	5.611	74.720	65.839	4.5457E-03	5.0144E-03	0.449
16	16	312.5	562.5	1.461	1.288	74.529	65.670	1.0463E-03	1.1545E-03	0.377
17	17	312.9	563.1	1.404	1.237	74.480	65.627	1.0059E-03	1.1101E-03	0.391
18	18	313.1	563.6	1.316	1.159	74.439	65.591	9.4317E-04	1.0409E-03	0.392
19	19	313.6	564.5	1.119	0.986	74.371	65.531	8.0320E-04	8.8652E-04	0.379
20	20	312.3	562.1	1.999	1.761	74.563	65.700	1.4302E-03	1.5781E-03	0.296
21	21	312.3	562.1	5.402	4.760	74.563	65.701	3.8651E-03	4.2646E-03	0.369
22	22	312.5	562.5	3.339	2.942	74.533	65.674	2.3903E-03	2.6275E-03	0.423
23	26	338.8	609.9	0.000	0.000	70.755	62.345	0.0000	0.0000	0.000
24	27	312.8	563.0	5.902	5.200	74.490	65.635	4.2277E-03	4.6654E-03	0.407
25	28	313.3	563.9	4.383	3.862	74.419	65.573	3.1429E-03	3.4687E-03	0.412
26	29	311.9	561.5	21.325	18.790	74.610	65.742	1.5248E-02	1.6823E-02	0.396
27	30	312.2	562.0	8.509	7.498	74.573	65.709	6.0879E-03	6.7172E-03	0.399
28	31	312.7	562.9	6.983	6.153	74.497	65.642	5.0016E-03	5.5194E-03	0.417
29	32	311.9	561.5	22.464	19.794	74.610	65.742	1.6062E-02	1.7722E-02	0.397
30	34	312.3	562.2	13.959	12.300	74.553	65.692	9.9893E-03	1.1022E-02	0.373
31	33	311.5	560.7	11.173	9.845	74.675	65.799	7.9813E-03	8.8350E-03	0.381
32	35	311.2	560.1	11.232	10.163	74.719	65.837	2.4436E-02	2.6955E-02	0.374
33	36	310.2	558.4	17.914	15.785	74.655	65.957	1.2761E-02	1.4374E-02	0.341
34	37	302.9	545.2	0.000	0.000	75.915	66.891	0.0000	0.0000	0.000
35	38	310.4	558.7	17.092	15.060	74.834	65.939	1.2179E-02	1.3433E-02	0.337
36	39	311.8	561.2	11.428	10.070	74.634	65.763	8.1681E-03	9.0117E-03	0.489
37	40	313.4	564.2	10.154	8.947	74.398	65.555	7.2835E-03	8.0387E-03	0.501
38	41	313.2	563.8	10.738	8.581	74.429	65.582	6.9823E-03	7.7059E-03	0.399
39	42	311.7	561.1	10.099	8.898	74.646	65.773	7.2169E-03	7.9620E-03	0.437
40	43	313.4	564.1	10.283	9.060	74.402	65.558	7.3757E-03	8.1404E-03	0.474

42	45	314.6	567.5	2.870	3.931	74.134	65.322	2.0673E-03	2.2826E-03	0.445
43	46	315.3	540.4	0.071	0.063	76.294	67.225	4.9450E-05	5.441E-05	0.005
44	47	300.2	559.2	1.113	0.991	74.792	65.902	7.9362E-04	8.7536E-04	0.460
45	48	310.7	563.1	2.469	2.175	74.483	65.629	1.7686E-03	1.9517E-03	0.438
46	49	312.8	563.4	2.244	1.978	74.484	65.631	1.6078E-02	1.7742E-02	0.384
47	50	313.0	562.0	1.618	1.425	74.461	65.611	1.1592E-03	1.2792E-03	0.377
48	51	312.7	562.9	1.440	1.269	74.500	65.644	1.0312E-03	1.1379E-03	0.391
49	52	313.0	563.5	1.338	1.179	74.498	65.643	9.5812E-04	1.0573E-03	0.272
50	53	313.3	563.9	1.395	1.230	74.454	65.604	1.0008E-03	1.1045E-03	0.275
51	54	313.6	564.2	1.499	1.312	74.421	65.575	1.0681E-03	1.1788E-03	0.313
52	55	312.6	564.6	1.240	1.093	74.523	65.665	9.8793E-04	9.7989E-04	0.432
53	56	313.4	564.2	0.912	0.803	74.396	65.553	6.5401E-04	7.2183E-04	0.291
54	57	315.2	567.3	1.730	1.524	74.145	65.331	1.2459E-03	1.3757E-03	0.577
55	58	315.0	567.1	0.985	0.868	74.166	65.351	7.0933E-04	7.8317E-04	0.395
56	59	315.7	568.3	1.048	0.924	74.072	65.267	7.5577E-04	8.3457E-04	0.423
57	60	317.2	571.0	1.316	1.160	73.849	65.071	9.5204E-04	1.0517E-03	0.521
58	61	310.6	559.0	10.618	9.358	74.809	65.917	7.5691E-03	8.3485E-03	0.363
59	62	310.6	559.0	10.809	9.524	74.809	65.717	7.7051E-03	8.4985E-03	0.398
60	63	311.7	561.1	10.819	9.533	74.809	65.917	7.7121E-03	8.5062E-03	0.376
61	64	312.9	563.3	9.583	8.444	74.643	65.771	6.8944E-03	7.5556E-03	0.374
62	65	312.8	563.4	17.349	15.287	74.471	65.619	1.2431E-02	1.3719E-02	0.330
63	66	313.0	563.4	18.341	16.161	74.461	65.611	1.3144E-02	1.4505E-02	0.349
64	67	312.8	563.0	17.258	15.206	74.487	65.633	1.2363E-02	1.3643E-02	0.379
65	68	314.2	565.6	16.917	14.906	74.281	65.452	1.2157E-02	1.3420E-02	0.331
66	69	315.8	568.4	28.255	24.896	74.056	65.254	2.0375E-02	2.2500E-02	0.340
67	70	316.2	569.1	35.577	31.338	74.003	65.207	2.5676E-02	2.8356E-02	0.340
68	71	317.0	570.6	38.788	34.178	73.885	65.103	2.8045E-02	3.0978E-02	0.330
69	72	317.9	572.3	40.212	35.432	73.749	64.983	2.9136E-02	3.2191E-02	0.348
70	73	318.6	569.3	5.892	5.015	73.984	65.190	4.1090E-03	4.5381E-03	0.414
71	74	321.1	573.5	10.632	9.368	72.652	64.897	7.7151E-03	8.5253E-03	0.364
72	75	324.1	577.9	11.767	10.368	73.301	64.589	8.5852E-03	9.4022E-03	0.390
73	76	327.3	583.4	4.962	4.372	72.962	64.202	3.6455E-03	4.0336E-03	0.371
74	77	327.3	589.2	4.523	3.986	72.405	63.798	3.2472E-03	3.7066E-03	0.360

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9489E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 105
DUY NO. 23
ORB MATED
α = -90°, β = 0°

MACH 5.22 3.2232E 06 6.3367E 05 0.197 6.62 97.27 1509.0 0.0060
REL LENGTH(METER) PT(ATM) TT(DEG K) HT(JOULE/KG) RS(METER) C.001R
MACH 5.22 9.8244E 05 6.3367E 05 0.645 97.27 1509.0 0.0060
REL LENGTH(FT) PT(PSI) TT(DEG R) HT(RTU/LBM) PS(FT)

CHAN	T/C	H/W/HT	C/QS	H/H(1.000)	M/H(10.900)	H/H(1.000)	Q/QS	H/W/HT	T/C	CHAN	T/C	H/W/HT	C/QS	H/H(1.000)	M/H(10.900)	H/H(1.000)
1	1	0.367	0.2224	0.2224	0.2641	0.2915	0.2053	0.364	42	39	42	0.364	0.2053	0.2053	0.2435	0.2435
2	2	0.367	0.2417	0.2417	0.2870	0.3167	0.2152	0.366	43	40	43	0.366	0.2152	0.2152	0.2555	0.2555
3	3	0.367	0.1948	0.1948	0.2314	0.2553	0.5601	0.364	44	41	44	0.364	0.5601	0.5601	0.6247	0.6247
4	4	0.367	0.1626	0.1626	0.1931	0.2131	0.0852	0.367	45	42	45	0.367	0.0852	0.0852	0.1012	0.1012
5	5	0.367	0.1287	0.1287	0.1528	0.1686	0.1175	0.368	46	43	46	0.368	0.1175	0.1175	0.1395	0.1395
6	6	0.367	0.1112	0.1112	0.1321	0.1458	0.0020	0.348	47	44	47	0.348	0.0020	0.0020	0.0024	0.0024
7	7	0.367	0.1065	0.1065	0.1265	0.1396	0.1671	0.364	48	45	48	0.364	0.1671	0.1671	0.1983	0.1983
8	8	0.366	0.0878	0.0878	0.1042	0.1150	0.0233	0.365	50	46	50	0.365	0.0233	0.0233	0.0277	0.0277
9	9	0.365	0.0603	0.0603	0.0716	0.0789	0.0123	0.365	51	47	51	0.365	0.0123	0.0123	0.0146	0.0146
10	10	0.365	0.0497	0.0497	0.0590	0.0651	0.0068	0.365	53	48	53	0.365	0.0068	0.0068	0.0081	0.0081
11	11	0.364	0.0606	0.0606	0.0719	0.0793	0.0060	0.364	55	49	55	0.364	0.0060	0.0060	0.0072	0.0072
12	12	0.364	0.0422	0.0422	0.0501	0.0552	0.0156	0.364	57	50	57	0.364	0.0156	0.0156	0.0185	0.0185
13	13	0.363	0.0230	0.0230	0.0273	0.0301	0.0247	0.364	59	51	59	0.364	0.0247	0.0247	0.0293	0.0293
14	14	0.362	0.0203	0.0203	0.0241	0.0265	0.0078	0.365	60	52	60	0.365	0.0078	0.0078	0.0093	0.0093
15	15	0.362	0.0495	0.0495	0.0587	0.0647	0.0039	0.364	61	53	61	0.364	0.0039	0.0039	0.0046	0.0046
16	16	0.364	0.0452	0.0452	0.0536	0.0591	0.0064	0.365	65	54	65	0.365	0.0064	0.0064	0.0076	0.0076
17	17	0.365	0.0405	0.0405	0.0481	0.0530	0.0332	0.366	68	55	68	0.366	0.0332	0.0332	0.0395	0.0395
18	18	0.365	0.0310	0.0310	0.0368	0.0405	0.0122	0.367	69	56	69	0.367	0.0122	0.0122	0.0145	0.0145
19	20	0.365	0.0121	0.0121	0.0143	0.0158	0.0098	0.367	70	57	70	0.367	0.0098	0.0098	0.0117	0.0117
20	22	0.364	0.0351	0.0351	0.0417	0.0460	0.0267	0.365	72	58	72	0.365	0.0267	0.0267	0.0318	0.0318
21	24	0.364	0.0461	0.0461	0.0547	0.0603	0.2717	0.363	73	59	73	0.363	0.2717	0.2717	0.3223	0.3223
22	25	0.364	0.0525	0.0525	0.0624	0.0688	0.2445	0.363	74	60	74	0.363	0.2445	0.2445	0.2900	0.2900
23	26	0.394	0.0030	0.0030	0.0000	0.0000	0.2032	0.363	75	61	75	0.363	0.2032	0.2032	0.2410	0.2410
24	27	0.365	0.0611	0.0611	0.0725	0.0799	0.2011	0.364	76	62	76	0.364	0.2011	0.2011	0.2386	0.2386
25	28	0.365	0.0562	0.0562	0.0667	0.0736	0.2434	0.366	77	63	77	0.366	0.2434	0.2434	0.2890	0.2890
26	29	0.365	0.1396	0.1396	0.2369	0.2613	0.2193	0.366	78	64	78	0.366	0.2193	0.2193	0.2604	0.2604
27	30	0.364	0.1111	0.1111	0.1318	0.1454	0.2376	0.365	79	65	79	0.365	0.2376	0.2376	0.2820	0.2820
28	31	0.365	0.0823	0.0823	0.0977	0.1078	0.3237	0.366	80	66	80	0.366	0.3237	0.3237	0.3843	0.3843
29	32	0.366	0.2045	0.2045	0.2428	0.2679	0.2331	0.369	81	67	81	0.369	0.2331	0.2331	0.2771	0.2771
30	34	0.364	0.1322	0.1322	0.1569	0.1731	0.2459	0.369	82	68	82	0.369	0.2459	0.2459	0.2923	0.2923
31	33	0.364	0.1752	0.1752	0.2079	0.2332	0.2617	0.370	83	69	83	0.370	0.2617	0.2617	0.3110	0.3110
32	35	0.365	0.1953	0.1953	0.2318	0.2557	0.2523	0.370	84	70	84	0.370	0.2523	0.2523	0.3000	0.3000
33	36	0.362	0.2510	0.2510	0.2977	0.3282	0.1882	0.369	85	71	85	0.369	0.1882	0.1882	0.2236	0.2236
34	37	0.350	0.0000	0.0000	0.0000	0.0000	0.1390	0.371	86	72	86	0.371	0.1390	0.1390	0.1652	0.1652
35	38	0.364	0.2285	0.2285	0.2711	0.2990	0.0952	0.373	87	73	87	0.373	0.0952	0.0952	0.1133	0.1133
36	39	0.364	0.2078	0.2078	0.2465	0.2719	0.0675	0.378	88	74	88	0.378	0.0675	0.0675	0.0804	0.0804
37	40	0.366	0.2624	0.2624	0.3115	0.3437	0.0832	0.381	89	75	89	0.381	0.0832	0.0832	0.0992	0.0992
38	41	0.367	0.3494	0.3494	0.4149	0.4578									0.1099	0.1099

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***
 WACH RE/METER 3.2232E 05 6.3367E 05 0.197 6.62 838.3 0.86469E 06 0.021P
 WACH RE/FT 9.8244E 05 6.3367E 05 0.645 97.27 1509.0 371.84 0.0060
 TEST NO. 105
 RUN NO. 23

CHAN	T/C	TW(DEC K)	TW(DEC R)	QIN/CM2	QIBTU/FT2-SEC	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.000)	ST(0.050)	TT(1.000)
1	1	316.2	569.2	16.659	14.679	74.910	66.006	1.1006E-02	1.3236E-02	0.236
2	2	315.9	568.6	18.117	15.964	74.961	66.050	1.3031E-02	1.5382E-02	0.328
3	3	316.3	569.3	14.593	12.858	74.909	66.005	1.0506E-02	1.1594E-02	0.371
4	4	316.3	569.3	12.176	10.729	74.903	65.999	8.7671E-03	9.6754E-03	0.380
5	5	316.3	569.3	9.638	8.492	74.909	66.005	6.9311E-03	7.6579E-03	0.367
6	6	316.0	568.8	8.335	7.345	74.950	66.041	5.9976E-03	6.6185E-03	0.395
7	7	315.7	568.3	7.987	7.037	74.982	66.069	5.7439E-03	6.3382E-03	0.390
8	8	315.1	567.2	6.588	5.805	75.074	66.150	4.7315E-03	5.2202E-03	0.393
9	9	314.5	566.0	4.531	3.993	75.167	66.232	3.2497E-03	3.5849E-03	0.368
10	10	314.1	565.3	3.739	3.295	75.221	66.280	2.6795E-03	2.9556E-03	0.392
11	11	313.4	564.1	4.587	4.024	75.318	66.365	3.2675E-03	3.6037E-03	0.410
12	12	313.1	563.6	3.180	2.802	75.360	66.403	2.2737E-03	2.5074E-03	0.418
13	13	312.7	562.9	1.737	1.531	75.413	66.450	1.2413E-03	1.3688E-03	0.434
14	14	311.9	561.4	1.531	1.351	75.535	66.557	1.0934E-03	1.2054E-03	0.369
15	15	312.1	561.7	3.735	3.291	75.510	66.535	2.6648E-03	2.9381E-03	0.430
16	16	313.7	564.7	3.398	2.995	75.273	66.320	2.4338E-03	2.6844E-03	0.292
17	17	314.1	565.4	3.046	2.684	75.220	66.279	2.1825E-03	2.4075E-03	0.367
18	18	314.4	565.9	2.333	2.056	75.178	66.242	1.6731E-03	1.8457E-03	0.361
19	19	314.6	566.3	0.908	0.800	75.141	66.210	6.5161E-04	7.1885E-04	0.323
20	20	313.2	563.7	2.647	2.332	75.350	66.393	1.8931E-03	2.0878E-03	0.360
21	21	313.5	564.2	3.470	3.058	75.308	66.357	2.4835E-03	2.7390E-03	0.409
22	22	313.7	564.7	3.955	3.485	75.271	66.324	2.8322E-03	3.1238E-03	0.404
23	23	313.8	564.9	0.000	0.000	71.683	63.163	0.0000	0.0000	*****
24	24	314.1	565.4	4.593	4.047	75.218	66.277	3.2916E-03	3.6309E-03	0.444
25	25	314.6	566.3	4.225	3.722	75.148	66.215	3.0305E-03	3.3432E-03	0.413
26	26	314.6	566.4	14.995	13.213	75.139	66.208	1.6738E-02	1.8669E-02	0.351
27	27	313.7	564.6	8.362	7.368	75.281	66.332	5.9862E-03	6.5025E-03	0.431
28	28	314.2	565.5	6.192	5.456	75.208	66.268	4.4380E-03	4.8954E-03	0.394
29	29	314.9	566.8	15.363	13.536	75.107	66.179	1.1027E-02	1.2166E-02	0.359
30	30	313.8	564.8	9.953	8.770	75.268	66.321	7.1266E-03	7.8605E-03	0.394
31	31	313.0	563.3	13.207	11.637	75.381	66.421	9.4407E-03	1.0411E-02	0.404
32	32	314.0	565.3	14.694	12.947	75.226	66.284	1.0528E-02	1.1613E-02	0.348
33	33	311.6	561.0	18.970	16.715	75.570	66.587	1.3522E-02	1.4967E-02	0.380
34	34	301.8	543.2	0.000	0.000	76.988	67.837	0.0000	0.0000	2.409
35	35	313.0	563.8	17.223	15.176	75.372	66.413	1.2313E-02	1.3579E-02	0.358
36	36	313.2	563.8	15.654	13.794	75.341	66.386	1.1197E-02	1.2349E-02	0.452
37	37	315.2	567.4	19.696	17.354	75.060	66.138	1.4148E-02	1.5609E-02	0.432
38	38	315.7	568.2	26.204	23.089	74.994	66.080	1.8642E-02	2.0791E-02	0.396
39	39	313.0	563.5	15.473	13.333	75.373	66.414	1.1062E-02	1.2199E-02	0.390
40	40	313.9	566.7	16.163	14.242	75.109	66.182	1.1601E-02	1.2799E-02	0.378
41	41	313.5	564.3	12.181	10.717	75.304	66.353	3.0187E-02	3.2797E-02	0.366

[illegible]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AFES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***
 TEST NO. 195
 5.22 3.1275E 05 6.2665E 05 0.197 6.58 240.9 0.012 0.0060
 5.22 9.7156E 05 6.2665E 05 0.645 96.66 1513.6 373.05
 ET MATED
 3 = -90°, 8 = 0°

CHAN	T/C	H/W/HT	Q/D/S	H/MS(1.000)	H/MS(0.900)	H/MS(0.850)	CHAR	T/C	H/W/HT	Q/D/S	H/MS(1.000)	H/MS(0.900)	H/MS(0.850)
1	1	0.377	0.0764	0.0764	0.0910	0.1007	39	51	0.379	0.0650	0.0660	0.0787	0.0870
2	2	0.377	0.1124	0.1124	0.1339	0.1480	40	54	0.373	0.0444	0.0444	0.0528	0.0584
3	3	0.378	0.1382	0.1382	0.1647	0.1821	41	55	0.371	0.0254	0.0254	0.0422	0.0466
4	4	0.378	0.1546	0.1546	0.1843	0.2038	42	56	0.375	0.0418	0.0418	0.0498	0.0553
5	5	0.377	0.1556	0.1556	0.1854	0.2050	43	57	0.378	0.0552	0.0552	0.0658	0.0727
6	6	0.378	0.1676	0.1676	0.1997	0.2209	44	58	0.378	0.0800	0.0800	0.0953	0.1054
7	7	0.377	0.1729	0.1729	0.2060	0.2278	45	60	0.372	0.0411	0.0411	0.0489	0.0543
8	8	0.377	0.1731	0.1731	0.2061	0.2278	46	61	0.372	0.0432	0.0432	0.0514	0.0567
9	9	0.376	0.1652	0.1652	0.1967	0.2174	47	62	0.375	0.0385	0.0385	0.0458	0.0506
10	10	0.375	0.1818	0.1818	0.2164	0.2392	48	63	0.377	0.0766	0.0766	0.0912	0.1009
11	11	0.374	0.2249	0.2249	0.2677	0.2958	49	64	0.378	0.1310	0.1310	0.1561	0.1726
12	12	0.373	0.2727	0.2727	0.3244	0.3584	50	65	0.378	0.0657	0.0657	0.0783	0.0866
13	13	0.374	0.3332	0.3332	0.3935	0.4437	51	66	0.376	0.0222	0.0222	0.0285	0.0293
14	14	0.372	0.2657	0.2657	0.3160	0.3491	52	67	0.374	0.0058	0.0058	0.0069	0.0076
15	15	0.373	0.3988	0.3988	0.4056	0.4167	53	68	0.370	0.0025	0.0025	0.0029	0.0032
16	16	0.377	0.2817	0.2817	0.3356	0.3711	54	70	0.371	0.0374	0.0374	0.0444	0.0491
17	17	0.378	0.1108	0.1108	0.1321	0.1461	55	71	0.375	0.0302	0.0302	0.0360	0.0398
18	18	0.378	0.0428	0.0428	0.0510	0.0564	56	72	0.377	0.0694	0.0694	0.0694	0.0714
19	19	0.373	0.0377	0.0377	0.0448	0.0495	57	73	0.378	0.1366	0.1366	0.1628	0.1800
20	20	0.378	0.2666	0.2666	0.3176	0.3513	58	77	0.371	0.0325	0.0325	0.0386	0.0427
21	21	0.372	0.0554	0.0554	0.0659	0.0727	59	78	0.374	0.0255	0.0255	0.0303	0.0335
22	22	0.376	0.0765	0.0765	0.0911	0.1007	60	79	0.376	0.0540	0.0540	0.0644	0.0712
23	23	0.378	0.1507	0.1507	0.1796	0.1986	61	81	0.377	0.0662	0.0662	0.0789	0.0872
24	24	0.378	0.1385	0.1385	0.1650	0.1825	62	84	0.371	0.0270	0.0270	0.0321	0.0355
25	25	0.378	0.0681	0.0681	0.0812	0.0898	63	85	0.374	0.0213	0.0213	0.0254	0.0280
26	26	0.377	0.0168	0.0168	0.0200	0.0221	64	86	0.376	0.0264	0.0264	0.0314	0.0348
27	27	0.375	0.0037	0.0037	0.0044	0.0049	65	90	0.370	0.0214	0.0214	0.0254	0.0281
28	28	0.369	0.0033	0.0033	0.0039	0.0043	66	91	0.373	0.0173	0.0173	0.0206	0.0227
29	29	0.373	0.0939	0.0939	0.1117	0.1234	67	92	0.375	0.0130	0.0130	0.0154	0.0171
30	30	0.373	0.0777	0.0777	0.0924	0.1021	68	94	0.378	0.0333	0.0333	0.0397	0.0439
31	31	0.376	0.0783	0.0783	0.0924	0.1031	69	98	0.370	0.0177	0.0177	0.0211	0.0233
32	32	0.378	0.1213	0.1213	0.1445	0.1598	70	99	0.374	0.0141	0.0141	0.0168	0.0186
33	33	0.379	0.0919	0.0919	0.1095	0.1212	71	100	0.376	0.0085	0.0085	0.0102	0.0112
34	34	0.353	0.0000	0.0000	0.0000	0.0000	72	103	0.370	0.0184	0.0184	0.0219	0.0241
35	35	0.373	0.0563	0.0563	0.0670	0.0740	73	104	0.374	0.0184	0.0184	0.0219	0.0242
36	36	0.376	0.0770	0.0770	0.0917	0.1014	74	105	0.376	0.0145	0.0145	0.0172	0.0190
37	37	0.378	0.1311	0.1311	0.1562	0.1727	75	107	0.379	0.0120	0.0120	0.0144	0.0159
38	38	0.379	0.1484	0.1484	0.1769	0.1957							

42	56	324.1	585.4	5.092	2.724	73.650	64.903	2.9999E-03	3.3174E-03	0.385
43	57	326.2	587.2	4.066	3.583	73.659	64.903	2.9999E-03	3.3174E-03	0.385
44	58	327.6	587.9	5.896	5.186	73.671	64.852	4.3461E-03	4.8066E-03	0.378
45	59	329.9	577.6	3.059	2.606	74.416	65.570	2.2307E-03	2.4638E-03	0.411
46	60	320.1	578.0	3.212	2.882	74.382	65.540	2.3430E-03	2.5880E-03	0.400
47	61	321.1	583.2	2.846	2.502	73.971	65.178	2.0898E-03	2.3088E-03	0.401
48	62	324.0	586.5	5.645	4.974	73.708	64.947	4.1614E-03	4.6015E-03	0.397
49	63	325.9	587.9	9.642	8.496	73.604	64.855	7.1192E-03	7.8755E-03	0.390
50	64	326.6	587.2	4.842	4.266	73.634	64.899	3.5720E-03	3.9502E-03	0.390
51	65	329.1	585.2	1.642	1.447	73.817	65.043	1.2085E-03	1.3362E-03	0.397
52	66	323.4	582.1	0.427	0.377	74.061	65.258	2.1238E-03	2.3633E-03	0.379
53	67	323.5	575.0	0.184	0.162	74.620	65.751	1.3387E-04	1.4781E-04	0.178
54	68	320.4	576.7	2.783	2.452	74.483	65.630	2.0270E-03	2.2385E-03	0.399
55	69	323.6	582.5	2.237	1.971	74.029	65.229	1.6410E-03	1.8136E-03	0.395
56	70	325.4	585.7	5.118	4.510	73.771	65.003	3.7694E-03	4.1676E-03	0.419
57	71	326.4	587.5	10.058	8.863	73.629	64.877	7.4238E-03	8.2101E-03	0.392
58	72	320.3	576.6	2.420	2.132	74.495	65.641	1.7625E-03	1.9464E-03	0.397
59	73	323.3	581.9	1.888	1.664	74.076	65.271	1.3841E-03	1.5295E-03	0.380
60	74	325.1	585.2	3.989	3.515	73.813	65.040	2.9361E-03	3.2561E-03	0.396
61	75	325.9	586.7	4.880	4.300	73.698	64.938	3.5977E-03	3.9783E-03	0.400
62	76	320.1	576.3	2.014	1.775	74.522	65.464	1.4664E-03	1.6194E-03	0.392
63	77	322.6	580.7	1.581	1.393	74.168	65.352	1.1571E-03	1.2785E-03	0.383
64	78	324.4	583.9	1.952	1.720	73.919	65.133	1.4343E-03	1.5854E-03	0.428
65	79	319.6	575.3	1.594	1.405	74.598	65.731	1.1503E-03	1.2801E-03	0.391
66	80	322.5	580.5	1.283	1.131	74.183	65.365	9.3892E-04	1.0374E-03	0.399
67	81	324.3	583.7	0.959	0.845	73.931	65.143	7.0476E-04	7.7901E-04	0.399
68	82	326.4	587.4	2.424	2.163	73.616	64.883	1.8114E-03	2.0032E-03	0.349
69	83	319.9	575.8	1.322	1.165	74.561	65.698	9.6200E-04	1.0623E-03	0.384
70	84	322.7	580.8	1.048	0.924	74.160	65.345	7.5731E-04	8.4783E-04	0.388
71	85	324.5	584.1	0.831	0.556	73.898	65.114	4.6547E-04	5.1232E-04	0.335
72	86	320.0	576.0	1.371	1.208	74.543	65.692	9.9756E-04	1.1016E-03	0.352
73	87	322.7	580.9	1.365	1.203	74.151	65.337	9.9970E-04	1.1046E-03	0.370
74	88	324.5	584.1	1.069	0.942	73.904	65.120	7.8596E-04	8.6880E-04	0.369
75	89	327.2	588.9	0.886	0.781	73.521	64.782	6.5693E-04	7.2442E-04	0.368

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9050E-01 (SLUGS/FT²-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***
 TEST NO. 195
 PUN. NO. 25

MACH 5.22 3.2087E-06 6.3082E-05 0.197 6.56 835.9 TT(DEC K) HT(JOULE/KG) RS(METER) 0.0018
 MACH 5.22 9.7801E-05 6.3082E-05 0.645 96.37 1504.7 TT(DEC R) HT(BTU/LBM) RS(FT) 0.0060

CHAN	T/C	TIME(SEC)	Q(1W/CM2)	Q(BTU/FT2-SEC)	Q(S1W/CM2)	Q(S1BTU/FT2-SEC)	ST(10.900)	ST(10.850)	TIME(SEC)
1	309.0	556.2	0.657	0.579	75.232	66.290	4.7169E-04	5.1982E-04	0.425
2	308.6	555.5	0.661	0.582	75.290	66.341	4.7366E-04	5.2195E-04	0.426
3	308.7	555.7	0.704	0.621	75.275	66.327	5.0513E-04	5.5664E-04	0.434
4	308.7	555.7	0.725	0.639	75.273	66.326	5.1997E-04	5.7300E-04	0.486
5	308.5	555.3	0.700	0.617	75.306	66.355	5.0183E-04	5.598E-04	0.412
6	308.4	555.0	0.656	0.578	75.327	66.373	4.6999E-04	5.88E-04	0.369
7	308.1	554.6	0.744	0.656	75.359	66.401	5.3301E-04	5.129E-04	0.399
8	307.6	553.6	0.756	0.666	75.440	66.472	5.5088E-04	5.5589E-04	0.380
9	307.1	552.7	0.549	0.494	75.512	66.536	3.9229E-04	4.3214E-04	0.401
10	306.8	552.2	0.637	0.561	75.553	66.572	4.5504E-04	5.0123E-04	0.435
11	306.4	551.5	0.684	0.602	75.607	66.620	4.8788E-04	5.3735E-04	0.425
12	306.3	551.3	0.544	0.479	75.620	66.631	3.8817E-04	4.2753E-04	0.402
13	306.4	551.5	0.619	0.546	75.605	66.618	4.4195E-04	4.8677E-04	0.447
14	305.7	550.3	0.407	0.358	75.704	66.706	2.8973E-04	3.1906E-04	0.386
15	305.8	550.4	0.317	0.279	75.697	66.700	2.2578E-04	2.4865E-04	0.408
16	306.4	551.5	0.655	0.577	75.607	66.620	4.6729E-04	5.1467E-04	0.581
17	306.9	552.4	0.711	0.627	75.536	66.557	5.0804E-04	5.5563E-04	0.585
18	307.2	552.9	0.382	0.336	75.497	66.523	2.7285E-04	3.0057E-04	0.338
19	308.1	554.6	0.562	0.496	75.363	66.405	4.0273E-04	4.4374E-04	0.338
20	306.9	552.3	0.285	0.251	75.551	66.553	2.0361E-04	2.2429E-04	0.319
21	306.8	552.3	3.641	3.208	75.545	66.566	2.6006E-03	2.8646E-03	0.402
22	307.3	553.1	4.069	3.585	75.480	66.508	2.9090E-03	3.2046E-03	0.419
23	308.8	609.9	0.002	0.000	0.000	0.000	0.0000	0.0000	0.000
24	307.5	553.5	4.674	4.118	75.452	66.483	3.3425E-03	3.6824E-03	0.461
25	308.0	554.4	4.394	3.872	75.377	66.417	3.1465E-03	3.4668E-03	0.433
26	308.4	555.0	15.246	13.534	75.327	66.373	1.0925E-02	1.2038E-02	0.359
27	307.1	552.8	8.429	7.427	75.506	66.531	6.0234E-03	6.6353E-03	0.448
28	307.7	553.8	6.198	5.461	75.421	66.456	4.4345E-03	4.8855E-03	0.408
29	308.7	555.6	15.160	13.358	75.283	66.335	1.0870E-02	1.1978E-02	0.354
30	307.5	553.4	10.011	8.821	75.454	66.485	7.1598E-03	7.8877E-03	0.412
31	306.7	552.0	13.238	11.665	75.567	66.585	9.4513E-03	1.0410E-02	0.415
32	307.9	556.3	14.809	13.049	75.389	66.428	1.0601E-02	1.1680E-02	0.357
33	305.8	550.5	19.045	16.781	75.689	66.692	1.3572E-02	1.4947E-02	0.388
34	307.9	543.5	0.000	0.000	0.000	0.000	0.0000	0.0000	0.013
35	307.1	552.8	16.995	14.975	75.507	66.532	1.2144E-02	1.3378E-02	0.360
36	307.3	553.1	15.950	14.054	75.478	66.506	1.1403E-02	1.2562E-02	0.477
37	309.1	556.4	20.149	17.754	75.220	66.279	1.4461E-02	1.5937E-02	0.453
38	308.7	557.5	26.492	23.343	75.131	66.200	1.9039E-02	2.0985E-02	0.420
39	307.0	552.6	15.666	13.804	75.521	66.545	1.1193E-02	1.2329E-02	0.399
40	308.8	555.9	16.462	14.505	75.262	66.316	1.1807E-02	1.3011E-02	0.394
41	309.0	554.4	42.733	37.654	75.374	66.414	3.0599E-02	3.3714E-02	0.272

42	45	309.7	555.6	6.901	0.794	75.279	66.331	6.4594E-04	7.1181E-04	0.585
43	46	308.3	555.9	1.217	1.072	75.261	66.315	8.7286E-04	9.6189E-04	0.632
44	47	309.3	558.7	0.000	0.000	0.000	0.000	0.0000	0.0000	0.152
45	48	305.9	552.5	12.462	10.981	75.528	66.551	8.9027E-03	9.8067E-03	0.372
46	49	307.7	551.8	0.871	0.855	75.423	66.458	6.9441E-04	7.6505E-04	0.687
47	50	307.3	556.0	0.462	0.407	75.410	66.446	3.3065E-04	3.6429E-04	0.573
48	51	307.1	554.3	0.488	0.436	75.381	66.421	3.4928E-04	3.8483E-04	0.519
49	52	307.8	554.2	0.433	0.382	75.395	66.433	3.1025E-04	3.4182E-04	0.317
50	53	307.8	554.0	0.308	0.271	75.410	66.446	2.2036E-04	2.4278E-04	0.261
51	54	307.9	554.2	0.341	0.300	75.396	66.434	2.4404E-04	2.6388E-04	0.408
52	55	307.9	554.0	0.494	0.435	75.251	66.306	3.5427E-04	3.9042E-04	0.484
53	56	307.9	556.0	0.397	0.350	75.249	66.304	2.8469E-04	3.1374E-04	0.448
54	57	309.3	556.8	0.316	0.278	75.186	66.249	2.2691E-04	2.5009E-04	0.263
55	58	310.5	558.9	0.990	0.872	75.021	66.104	7.1235E-04	7.8530E-04	0.742
56	59	310.9	559.6	0.377	0.332	74.969	66.058	2.7155E-04	2.9938E-04	0.354
57	60	311.1	560.0	0.462	0.407	74.932	66.025	3.3279E-04	3.6692E-04	0.485
58	61	312.6	562.2	0.624	0.550	74.756	65.870	4.5090E-04	4.9728E-04	0.590
59	62	309.8	552.2	19.811	17.457	75.254	66.573	1.4147E-02	1.5583E-02	0.302
60	63	306.7	552.1	18.070	15.922	75.563	66.581	1.2902E-02	1.4212E-02	0.331
61	64	306.4	551.5	15.115	13.318	75.604	66.617	1.0785E-02	1.1879E-02	0.380
62	65	307.4	553.3	14.821	13.059	75.464	66.494	1.0598E-02	1.1675E-02	0.405
63	66	309.5	557.7	17.731	15.624	75.116	66.187	1.2746E-02	1.4049E-02	0.331
64	67	309.8	557.2	16.183	14.259	75.157	66.224	1.1625E-02	1.2813E-02	0.328
65	68	302.8	557.6	17.900	15.773	75.127	66.197	1.2865E-02	1.4180E-02	0.343
66	69	310.6	559.1	23.797	20.968	75.001	66.086	1.7136E-02	1.8891E-02	0.334
67	70	313.1	563.7	17.622	15.527	74.643	65.771	1.2758E-02	1.4073E-02	0.333
68	71	313.1	563.5	19.021	16.760	74.653	65.779	1.3700E-02	1.5188E-02	0.350
69	72	313.3	564.0	19.776	17.426	74.619	65.750	1.4324E-02	1.5800E-02	0.311
70	73	313.7	564.6	18.571	16.364	74.567	65.703	1.2462E-02	1.4851E-02	0.310
71	74	311.6	560.2	14.234	12.552	74.866	65.967	1.0271E-02	1.1325E-02	0.425
72	75	313.4	564.1	10.525	9.274	74.612	65.743	7.6242E-03	8.4102E-03	0.403
73	76	315.1	567.1	7.186	6.332	74.368	65.528	5.2248E-03	5.7653E-03	0.461
74	77	319.1	574.4	5.203	4.655	73.791	65.020	3.8754E-03	4.2806E-03	0.454
75	78	322.4	580.3	6.149	5.418	73.325	64.609	4.5436E-03	5.0225E-03	0.382

FAFE-STREAM DENSITY=VELOCITY PRODUCT = 1.9067E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***														TEST NO. 195
WACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195						PUN NO. 26
5.22	3.3327E 06	6.5520E 05	0.197	6.85	838.4	0.86480E 06	0.0018							
WACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)							
5.22	1.0158E 06	6.5520E 05	0.645	100.64	1509.2	371.89	0.0060							
CHAN	T/C	TM(DEG K)	TM(DEG P)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)				
1	1	309.6	556.2	0.809	0.713	77.161	67.990	5.5529E-04	6.1189E-04	0.508				
2	2	309.3	556.7	0.831	0.732	77.203	68.027	5.7005E-04	6.2813E-04	0.472				
3	3	309.5	557.1	0.937	0.825	77.173	68.000	6.4272E-04	7.0823E-04	0.496				
4	4	309.5	557.1	0.815	0.718	77.168	67.996	5.5931E-04	6.1632E-04	0.539				
5	5	309.4	556.9	0.729	0.642	77.184	68.010	4.9975E-04	5.5068E-04	0.509				
6	6	309.2	556.6	0.752	0.663	77.210	68.032	5.1586E-04	5.6840E-04	0.506				
7	7	309.1	556.3	0.748	0.659	77.235	68.055	5.1291E-04	5.6513E-04	0.502				
8	8	308.6	555.5	0.704	0.620	77.303	68.114	4.8221E-04	5.3125E-04	0.516				
9	9	308.2	554.7	0.647	0.570	77.342	68.166	4.4263E-04	4.8760E-04	0.555				
10	10	307.9	554.3	0.772	0.680	77.399	68.199	5.2766E-04	5.8125E-04	0.589				
11	11	307.7	553.9	1.315	1.159	77.433	68.229	8.9912E-04	9.9038E-04	0.565				
12	12	307.7	553.9	1.171	1.032	77.426	68.223	8.0072E-04	8.8200E-04	0.569				
13	13	307.9	554.2	0.471	0.415	77.408	68.207	3.2175E-04	3.5442E-04	0.493				
14	14	307.0	552.6	0.355	0.313	77.536	68.320	2.4222E-04	2.6616E-04	0.515				
15	15	307.5	553.5	0.763	0.672	77.465	68.257	5.2122E-04	5.7409E-04	0.556				
16	16	308.3	554.9	0.871	0.768	77.349	68.155	5.9632E-04	6.5092E-04	0.531				
17	17	309.7	555.7	0.612	0.539	77.284	68.098	4.1906E-04	4.6169E-04	0.508				
18	18	309.8	555.9	0.831	0.732	77.269	68.085	5.6952E-04	6.2747E-04	0.486				
19	20	309.8	555.6	0.369	0.325	77.127	67.959	2.5309E-04	2.7891E-04	0.462				
20	22	308.8	555.9	0.365	0.322	77.268	68.083	2.5028E-04	2.7574E-04	0.390				
21	24	309.0	556.1	5.723	5.042	77.248	68.066	3.9220E-03	4.3213E-03	0.504				
22	25	309.4	556.9	3.533	3.113	77.190	68.015	2.4232E-03	2.6702E-03	0.576				
23	26	308.8	556.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*****				
24	27	309.6	557.3	6.230	5.489	77.156	67.985	4.2755E-03	4.7114E-03	0.537				
25	28	310.2	558.4	4.596	4.050	77.064	67.904	3.1584E-03	3.4809E-03	0.540				
26	29	308.7	555.7	22.297	19.470	77.285	68.098	1.5136E-02	1.6676E-02	0.516				
27	30	309.1	556.4	8.992	7.923	77.227	68.047	6.1647E-03	6.7924E-03	0.541				
28	31	309.8	557.6	7.684	6.770	77.126	67.959	5.2756E-03	5.8137E-03	0.566				
29	32	308.9	556.0	23.337	20.563	77.258	68.075	1.5992E-02	1.7619E-02	0.513				
30	34	309.5	557.0	14.556	12.825	77.175	68.002	9.9866E-03	1.1004E-02	0.510				
31	33	308.5	555.3	11.416	10.059	77.317	68.127	7.8160E-03	8.6107E-03	0.502				
32	35	308.2	554.8	34.073	30.023	77.356	68.161	2.3315E-02	2.5685E-02	0.477				
33	36	307.4	553.3	18.771	16.540	77.481	68.271	1.2821E-02	1.4121E-02	0.468				
34	37	301.6	542.8	0.000	0.000	0.000	0.000	0.0000	0.0000	0.963				
35	38	307.4	553.3	16.654	14.674	77.481	68.271	1.1375E-02	1.2529E-02	0.395				
36	39	308.6	555.6	12.057	10.624	77.294	68.107	8.2576E-03	9.0976E-03	0.626				
37	40	310.2	558.4	10.485	9.239	77.068	67.907	7.2053E-03	7.9410E-03	0.630				
38	41	309.9	557.8	9.920	8.741	77.116	67.950	6.8119E-03	7.5068E-03	0.512				
39	42	308.5	555.3	10.275	9.053	77.317	68.127	7.0346E-03	7.7499E-03	0.556				
40	43	310.2	558.4	10.749	9.471	77.061	67.902	7.3869E-03	8.1412E-03	0.550				
41	44	308.7	555.6	7.477	6.598	77.294	68.106	5.1209E-03	5.6418E-03	0.378				

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

42	45	309.9	557.9	1.447	1.275	77.106	67.941	9.5385E-04	1.0535E-03	0.618
43	46	310.2	558.4	0.846	0.745	77.061	67.902	5.8127E-04	6.4062E-04	0.691
44	47	298.2	536.8	0.000	0.000	0.000	0.000	0.0000	0.0000	0.052
45	48	307.2	553.0	1.243	1.095	77.502	68.289	8.4860E-04	9.3463E-04	0.609
46	49	309.2	556.5	0.838	0.739	77.218	68.040	5.7482E-04	6.3337E-04	0.663
47	50	309.1	556.4	0.555	0.489	77.226	68.046	3.8068E-04	4.1945E-04	0.521
48	51	307.7	557.4	0.353	0.311	77.142	67.973	2.4236E-04	2.6707E-04	0.405
49	52	309.7	557.4	0.291	0.257	77.147	67.977	1.9982E-04	2.2020E-04	0.382
50	53	309.8	557.7	0.357	0.315	77.124	67.956	2.4519E-04	2.7020E-04	0.394
51	54	310.4	558.7	0.623	0.551	77.041	67.884	4.1426E-04	4.5657E-04	0.512
52	55	310.3	558.5	0.878	0.774	77.053	67.894	6.0346E-04	6.6509E-04	0.427
53	56	310.4	558.7	0.545	0.481	77.042	67.884	3.7500E-04	4.1330E-04	0.569
54	57	311.7	561.1	0.583	0.513	76.850	67.715	4.0161E-04	4.4276E-04	0.425
55	58	313.6	564.5	1.702	1.500	76.571	67.469	1.1781E-03	1.2993E-03	0.813
56	59	313.0	563.4	0.526	0.472	76.662	67.550	3.7025E-04	4.0830E-04	0.592
57	60	313.8	564.8	0.532	0.469	76.548	67.449	3.6863E-04	4.0658E-04	0.642
58	61	315.7	568.3	0.921	0.812	76.267	67.202	6.4082E-04	7.0710E-04	0.830
59	62	307.5	553.5	10.890	9.595	77.463	68.255	7.4399E-03	8.1946E-03	0.485
60	63	307.5	553.5	11.047	9.734	77.460	68.253	7.5475E-03	8.3132E-03	0.509
61	64	307.6	553.8	11.302	9.959	77.441	68.236	7.7242E-03	8.5081E-03	0.493
62	65	309.1	556.5	9.869	8.696	77.221	68.042	6.7663E-03	7.4554E-03	0.482
63	66	310.2	558.3	17.803	15.686	77.076	67.914	1.2232E-02	1.3481E-02	0.442
64	67	310.3	558.5	18.551	16.346	77.055	67.896	1.2750E-02	1.4052E-02	0.457
65	68	311.0	559.7	17.612	15.518	76.956	67.809	1.2122E-02	1.3362E-02	0.490
66	69	312.8	563.0	18.189	16.027	76.697	67.580	1.2568E-02	1.3859E-02	0.449
67	70	314.7	565.2	28.227	24.872	76.514	67.419	1.9557E-02	2.1572E-02	0.459
68	71	315.2	569.7	6.633	3.279	76.153	67.101	2.5518E-02	2.8163E-02	0.641
69	72	315.2	567.3	38.558	33.974	76.344	67.269	2.6789E-02	2.9550E-02	0.457
70	73	316.4	569.5	39.589	34.883	76.165	67.112	2.7572E-02	3.0429E-02	0.478
71	74	312.3	563.2	5.995	5.282	76.680	67.565	4.1433E-03	4.5690E-03	0.521
72	75	315.3	567.5	11.170	9.843	76.331	67.258	7.7606E-03	8.5625E-03	0.497
73	76	317.8	572.0	12.107	10.668	75.962	66.933	8.4579E-03	9.3372E-03	0.513
74	77	320.6	577.0	5.206	4.587	75.560	66.579	3.6590E-03	4.0420E-03	0.486
75	78	324.2	583.5	4.704	4.145	75.033	66.114	3.3327E-03	3.6846E-03	0.483

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9855E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195		TEST NO. 27	
RUA NO.		RUA NO.	
ORB ALONE		ORB ALONE	
$\alpha = 120^\circ, \beta = 0^\circ$		$\alpha = 120^\circ, \beta = 0^\circ$	
REL LENGTH(METER)		REL LENGTH(METER)	
REL LENGTH(FT)		REL LENGTH(FT)	
REL LENGTH(FT)		REL LENGTH(FT)	
REL LENGTH(FT)		REL LENGTH(FT)	
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH 5.22 3.3033E 06 6.0121E 05 0.157 6.83 832.8 0.85056E 05 0.0018 RS(METER) TEST NO. 195
 MACH 5.22 1.0251E 06 6.0121E 05 0.645 100.45 1429.0 369.20 0.0060 RS(FT) RUN NO. 27

CHAN	T/C	TIME(SEC)	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	WT(JOULE/KG)	RS(METER)	TIME(SEC)
1	1	313.2	563.7	5.676	5.001	75.671	66.676	3.9636E-03	4.3734E-03
2	2	313.1	563.7	7.213	6.255	75.674	66.679	5.0365E-03	5.5572E-03
3	3	313.5	564.4	8.592	7.571	75.617	66.629	6.0049E-03	6.6262E-03
4	4	313.8	564.8	8.432	7.430	75.578	66.594	5.8967E-03	6.5072E-03
5	5	313.5	564.4	8.252	7.271	75.615	66.627	6.3645E-03	6.3645E-03
6	6	313.4	564.2	7.292	7.043	75.636	66.640	6.1631E-03	6.3791E-03
7	7	313.1	563.5	6.037	7.081	75.684	66.688	5.5853E-03	6.1911E-03
8	8	312.5	562.4	8.011	7.059	75.771	66.765	5.5859E-03	6.1624E-03
9	9	311.8	561.2	7.814	6.845	75.874	66.855	5.4404E-03	6.0099E-03
10	10	311.4	560.4	7.420	6.600	75.933	66.908	5.2098E-03	5.7460E-03
11	11	310.6	559.2	7.603	6.699	76.038	67.000	5.2800E-03	5.8225E-03
12	12	310.3	558.5	7.094	6.251	76.054	67.049	4.9225E-03	5.4278E-03
13	13	310.0	558.0	7.056	6.217	76.131	67.082	4.8935E-03	5.3956E-03
14	14	309.2	556.7	8.085	7.124	76.239	67.177	5.5979E-03	6.1712E-03
15	15	310.2	558.4	12.639	11.137	76.058	67.052	8.7697E-03	9.6700E-03
16	16	310.0	558.0	4.626	4.076	76.129	67.080	3.2084E-03	3.5376E-03
17	17	310.4	558.7	5.007	4.412	76.077	67.034	3.4752E-03	3.8320E-03
18	18	310.7	559.3	6.420	5.657	76.025	66.988	4.4594E-03	4.9177E-03
19	19	311.7	561.0	6.660	5.868	75.889	66.868	4.6357E-03	5.1132E-03
20	20	311.2	560.1	9.705	8.551	75.959	66.930	6.7478E-03	7.4421E-03
21	21	309.8	557.6	1.483	1.307	76.165	67.111	1.0279E-03	1.1333E-03
22	22	309.5	557.6	1.248	1.099	76.150	67.099	8.6501E-04	9.5373E-04
23	23	308.8	555.8	0.000	0.000	71.947	63.395	0.0000	0.0000
24	24	310.2	558.3	1.003	0.884	76.107	67.060	6.9619E-04	7.6764E-04
25	25	310.3	558.6	0.982	0.865	76.080	67.037	6.8164E-04	7.5163E-04
26	26	309.8	557.7	1.365	1.203	76.155	67.109	9.4642E-04	1.0435E-03
27	27	309.8	557.6	1.198	1.054	76.162	67.109	8.3062E-04	9.1580E-04
28	28	310.0	558.0	0.731	0.644	76.135	67.085	8.2989E-04	9.1503E-04
29	29	309.9	557.8	0.455	0.401	76.146	67.095	5.0693E-04	5.5892E-04
30	30	309.8	557.7	0.455	0.401	76.158	67.105	3.1557E-04	3.4793E-04
31	31	309.4	557.0	0.533	0.470	76.212	67.153	3.6917E-04	4.0700E-04
32	32	309.4	557.0	0.589	0.519	76.214	67.155	4.0823E-04	4.5006E-04
33	33	308.6	555.4	0.511	0.451	76.339	67.265	3.5349E-04	3.8963E-04
34	34	308.8	555.8	0.000	0.000	71.947	63.395	0.0000	0.0000
35	35	308.8	555.8	0.762	0.671	76.310	67.239	5.2709E-04	5.8101E-04
36	36	308.9	556.1	1.403	1.236	76.285	67.217	9.7072E-04	1.0701E-03
37	37	310.0	558.0	0.917	0.808	76.128	67.079	6.3605E-04	7.0131E-04
38	38	310.3	558.5	0.330	0.291	76.291	67.044	2.2885E-04	2.5234E-04
39	39	308.8	555.8	4.042	3.561	76.305	67.235	2.7959E-03	3.0819E-03
40	40	309.9	557.8	3.327	2.931	76.146	67.095	2.3067E-03	2.5433E-03
41	41	309.1	556.4	0.947	0.834	76.258	67.194	6.5522E-04	7.2230E-04

[illegible]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 28

WASH
5.22 3.3275E 06 6.68C1E 05 C.197 6.85 828.7 0.95408E 06 0.0018 PS(FT) 0.0060

WASH
5.22 1.0257E 06 6.68C1E 05 0.645 100.68 1491.6 367.27

ORB ALONE
α = 90°, β = 0°

CHAN	T/C	1W/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	1W/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.375	0.17C5	0.1605	0.1910	0.2112	39	42	0.368	0.0065	0.0065	0.0077	0.0085
2	2	0.375	0.1722	0.1722	0.2050	0.2266	40	43	0.369	0.0104	0.0104	0.0124	0.0137
3	3	0.376	0.1905	0.1905	0.2268	0.2507	41	44	0.368	0.0074	0.0074	0.0088	0.0097
4	4	0.376	0.1900	0.1800	0.2144	0.2370	42	45	0.373	0.0999	0.0999	0.1188	0.1313
5	5	0.376	0.1730	0.1730	0.2061	0.2278	43	46	0.374	0.1298	0.1298	0.1544	0.1706
6	6	0.376	0.1636	0.1636	0.1948	0.2153	44	47	0.357	0.0228	0.0228	0.0270	0.0297
7	7	0.375	0.1610	0.1610	0.1916	0.2118	45	48	0.368	0.0064	0.0064	0.0076	0.0084
8	8	0.374	0.1571	0.1571	0.1870	0.2066	46	50	0.372	0.1075	0.1075	0.1279	0.1413
9	9	0.374	0.1451	0.1451	0.1727	0.1907	47	51	0.373	0.1077	0.1077	0.1282	0.1416
10	10	0.374	0.1341	0.1341	0.1595	0.1762	48	53	0.373	0.0999	0.0999	0.1189	0.1313
11	11	0.371	0.1285	0.1285	0.1527	0.1687	49	55	0.372	0.0949	0.0949	0.1129	0.1248
12	12	0.371	0.1065	0.1065	0.1266	0.1398	50	57	0.373	0.0918	0.0918	0.1092	0.1206
13	13	0.370	0.1039	0.1039	0.1235	0.1363	51	59	0.373	0.0881	0.0881	0.1049	0.1159
14	14	0.369	0.1106	0.1106	0.1314	0.1451	52	60	0.374	0.0916	0.0916	0.1090	0.1204
15	15	0.370	0.0980	0.0980	0.1165	0.1287	53	61	0.374	0.1045	0.1045	0.1244	0.1375
16	16	0.370	0.0908	0.0908	0.1080	0.1192	54	65	0.375	0.0952	0.0952	0.1133	0.1253
17	17	0.371	0.0915	0.0915	0.1089	0.1202	55	68	0.376	0.0814	0.0814	0.0969	0.1072
18	18	0.372	0.1038	0.1038	0.1305	0.1442	56	69	0.377	0.1192	0.1192	0.1420	0.1571
19	19	0.373	0.0994	0.0994	0.1183	0.1307	57	70	0.378	0.1100	0.1100	0.1310	0.1449
20	20	0.371	0.0991	0.0991	0.1179	0.1302	58	72	0.379	0.1049	0.1049	0.1251	0.1383
21	21	0.369	0.0106	0.0106	0.0126	0.0140	59	73	0.369	0.0085	0.0085	0.0102	0.0112
22	22	0.359	0.0133	0.0133	0.0217	0.0240	60	74	0.369	0.0055	0.0055	0.0065	0.0072
23	23	0.398	0.0000	0.0000	0.0000	0.0000	61	75	0.369	0.0039	0.0039	0.0047	0.0052
24	24	0.359	0.0006	0.0006	0.0007	0.0008	62	76	0.370	0.0027	0.0027	0.0032	0.0035
25	25	0.370	0.0026	0.0026	0.0031	0.0034	63	77	0.374	0.0086	0.0086	0.0102	0.0113
26	26	0.365	0.0071	0.0071	0.0085	0.0093	64	78	0.374	0.0055	0.0055	0.0065	0.0072
27	27	0.369	0.0010	0.0010	0.0012	0.0014	65	79	0.374	0.0055	0.0055	0.0065	0.0072
28	28	0.369	0.0021	0.0021	0.0025	0.0028	66	80	0.375	0.0028	0.0028	0.0033	0.0036
29	29	0.369	0.0080	0.0080	0.0095	0.0105	67	81	0.377	0.0236	0.0236	0.0281	0.0310
30	30	0.369	0.0014	0.0014	0.0017	0.0019	68	82	0.380	0.0064	0.0064	0.0077	0.0085
31	31	0.368	0.0025	0.0025	0.0030	0.0033	69	83	0.378	0.0037	0.0037	0.0044	0.0048
32	32	0.369	0.0125	0.0125	0.0149	0.0164	70	84	0.378	0.0040	0.0040	0.0048	0.0053
33	33	0.367	0.0025	0.0025	0.0029	0.0032	71	85	0.376	0.0075	0.0075	0.0089	0.0099
34	34	0.398	0.0000	0.0000	0.0000	0.0000	72	86	0.379	0.0297	0.0297	0.0354	0.0392
35	35	0.368	0.0123	0.0123	0.0147	0.0162	73	87	0.382	0.0519	0.0519	0.0620	0.0686
36	36	0.368	0.0025	0.0025	0.0030	0.0033	74	88	0.388	0.0257	0.0257	0.0307	0.0340
37	37	0.370	0.0065	0.0065	0.0077	0.0085	75	89	0.392	0.0484	0.0484	0.0580	0.0643
38	38	0.370	0.0079	0.0079	0.0093	0.0103	76						

ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 28

153 JUN 1963

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CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	318.9	574.1	11.920	10.503	74.278	65.449	8.4603E-03	9.3509E-03	0.339
2	2	319.0	574.1	12.188	11.268	74.270	65.442	9.0778E-03	1.0034E-02	0.435
3	3	319.6	575.2	14.129	12.450	74.185	65.367	1.1101E-02	1.1101E-02	0.471
4	4	319.9	575.8	13.346	11.760	74.135	65.323	9.4935E-03	1.0495E-02	0.489
5	5	319.7	575.4	12.834	11.308	74.166	65.350	9.1247E-03	1.0087E-02	0.476
6	6	319.3	574.8	12.141	10.698	74.215	65.393	8.6256E-03	9.5345E-03	0.458
7	7	318.8	573.8	11.960	10.538	74.258	65.467	8.4859E-03	9.3790E-03	0.462
8	8	318.0	572.3	11.691	10.301	74.415	65.570	8.2800E-03	9.1496E-03	0.456
9	9	316.9	570.4	10.823	9.537	74.574	65.710	7.6470E-03	8.4479E-03	0.444
10	10	316.3	569.4	10.013	8.822	74.655	65.781	7.0655E-03	7.8045E-03	0.442
11	11	315.4	567.8	9.607	8.465	74.782	65.893	6.7660E-03	7.4722E-03	0.393
12	12	315.1	567.2	7.371	7.023	74.830	65.935	5.6095E-03	6.1945E-03	0.348
13	13	314.8	566.7	7.776	6.852	74.871	65.972	5.4691E-03	6.0391E-03	0.411
14	14	313.7	565.7	8.300	7.313	75.035	66.116	5.8231E-03	6.4283E-03	0.442
15	15	314.6	566.4	7.344	6.471	74.899	65.997	5.1627E-03	5.7005E-03	0.399
16	16	314.9	566.8	6.800	5.992	74.860	65.962	4.7833E-03	5.2819E-03	0.188
17	17	315.4	567.8	6.846	6.033	74.784	65.895	4.8216E-03	5.3248E-03	0.156
18	18	316.1	569.1	8.194	7.223	74.681	65.804	5.3869E-03	6.3869E-03	0.244
19	19	317.1	570.7	7.510	6.530	74.544	65.684	5.2381E-03	5.7870E-03	0.307
20	20	315.8	568.5	7.405	6.525	74.725	65.843	5.2201E-03	5.7654E-03	0.278
21	21	313.6	564.6	0.799	0.704	75.044	66.124	5.6026E-04	6.1348E-04	0.258
22	22	313.7	564.7	1.371	1.208	75.029	66.111	9.6160E-04	1.0616E-03	0.292
23	23	308.8	560.9	0.000	0.000	71.388	62.202	0.0000	0.0000	*****
24	24	314.1	565.4	0.043	0.038	74.974	66.062	3.0546E-05	3.3724E-05	1.754
25	25	314.4	566.0	0.193	0.170	74.927	66.021	1.3553E-04	1.4965E-04	0.853
26	26	313.9	565.0	0.514	0.471	75.011	66.095	3.7494E-04	4.1392E-04	0.564
27	27	313.8	564.8	0.077	0.068	75.026	66.108	5.4281E-05	5.9924E-05	0.687
28	28	314.1	565.3	0.158	0.140	74.985	66.072	1.1117E-04	1.2274E-04	1.242
29	29	314.0	565.2	0.600	0.529	74.994	66.080	4.2156E-04	4.6940E-04	0.594
30	30	313.7	564.6	0.109	0.096	75.040	66.121	7.6241E-05	8.4164E-05	0.519
31	31	313.3	563.9	0.187	0.165	75.097	66.171	1.3104E-04	1.4465E-04	0.300
32	32	313.5	564.3	0.940	0.828	75.065	66.143	6.5935E-04	7.2784E-04	0.553
33	33	312.2	561.9	0.186	0.163	75.257	66.312	1.2974E-04	1.4317E-04	0.244
34	34	308.8	560.9	0.000	0.000	71.388	62.202	0.0000	0.0000	*****
35	35	312.8	563.1	0.928	0.818	75.165	66.230	6.4975E-04	7.1715E-04	0.574
36	36	312.9	563.3	0.186	0.166	75.150	66.217	1.3158E-04	1.4522E-04	0.502
37	37	314.2	565.6	0.485	0.427	74.956	66.047	3.4062E-04	3.7606E-04	0.530
38	38	314.5	566.2	0.589	0.519	74.914	66.010	4.1408E-04	4.5721E-04	0.535
39	39	312.9	563.1	0.486	0.429	75.159	66.226	3.4053E-04	3.7585E-04	0.536
40	40	314.2	565.6	0.782	0.689	74.964	66.054	5.4897E-04	6.0598E-04	0.403
41	41	313.3	564.0	0.558	0.492	75.090	66.164	3.6117E-04	4.3179E-04	0.428

43	6	317.6	571.6	7.437	6.553	74.476	65.623	5.2621E-03	5.8142E-03	0.586
44	7	318.0	572.4	9.655	8.507	74.411	65.566	6.8387E-03	7.5569E-03	0.430
45	8	303.3	565.9	1.746	1.539	70.553	67.453	1.1974E-03	1.3188E-03	0.317
46	9	313.3	564.0	0.478	0.421	75.091	66.165	3.3513E-04	3.6993E-04	0.194
47	10	316.7	570.1	8.019	7.066	74.594	65.728	5.6639E-03	6.2570E-03	0.210
48	11	316.0	570.5	8.034	7.079	74.567	65.704	5.6766E-03	6.2712E-03	0.276
49	12	317.4	571.2	7.442	6.557	74.496	65.641	5.2640E-03	5.8161E-03	0.267
50	13	317.3	571.1	7.073	6.222	74.514	65.657	5.0018E-03	5.5262E-03	0.294
51	14	317.3	571.1	6.839	6.026	74.516	65.659	4.8360E-03	5.3430E-03	0.254
52	15	317.1	570.8	6.570	5.789	74.537	65.677	4.6442E-03	5.1310E-03	0.187
53	16	318.4	573.2	6.807	5.998	74.347	65.510	4.8262E-03	5.3337E-03	0.165
54	17	318.2	572.8	7.773	6.849	74.275	65.534	5.5099E-03	6.0878E-03	0.263
55	18	319.3	574.7	7.066	6.226	74.226	65.403	5.0194E-03	5.5482E-03	0.218
56	19	319.9	575.9	6.035	5.318	74.138	65.325	4.2930E-03	4.7460E-03	0.107
57	20	320.9	577.6	8.822	7.773	73.993	65.198	6.2891E-03	6.9544E-03	0.225
58	21	321.4	578.6	6.128	7.162	73.914	65.129	5.8013E-03	6.4159E-03	0.223
59	22	322.2	579.9	7.744	6.823	73.805	65.032	5.5365E-03	6.1241E-03	0.196
60	23	323.9	585.0	0.641	0.565	75.012	66.096	4.5010E-04	4.9889E-04	0.456
61	24	313.9	565.0	0.410	0.361	75.011	66.095	2.8780E-04	3.1772E-04	0.295
62	25	313.8	564.9	0.296	0.261	75.017	66.100	2.0767E-04	2.2926E-04	0.397
63	26	314.7	566.4	0.200	0.176	74.893	65.991	1.4077E-04	1.5543E-04	0.336
64	27	317.7	571.8	0.641	0.565	74.457	65.607	4.5383E-04	5.0166E-04	0.458
65	28	317.7	571.6	0.407	0.359	74.456	65.606	2.8843E-04	3.1870E-04	0.418
66	29	317.9	572.1	0.408	0.360	74.475	65.587	2.8895E-04	3.1929E-04	0.506
67	30	319.7	573.6	0.206	0.181	74.311	65.478	1.4580E-04	1.6121E-04	0.376
68	31	320.8	577.4	1.745	1.536	74.068	65.211	1.2425E-03	1.3739E-03	0.663
69	32	321.2	581.7	0.475	0.418	73.659	64.903	3.4016E-04	3.7635E-04	0.679
70	33	321.3	578.3	0.272	0.239	73.933	65.145	1.9388E-04	2.1441E-04	0.457
71	34	321.8	579.2	0.295	0.260	73.860	65.081	2.1063E-04	2.3296E-04	0.640
72	35	319.9	575.7	0.557	0.491	74.140	65.328	3.9597E-04	4.3775E-04	0.535
73	36	322.5	580.7	2.174	1.933	73.780	65.010	1.5690E-03	1.7356E-03	0.540
74	37	325.2	585.7	3.911	3.358	73.363	64.843	2.7435E-03	3.0369E-03	0.411
75	38	330.4	584.7	1.864	1.643	72.515	63.994	1.3580E-03	1.5051E-03	0.248
76	39	333.1	589.7	3.499	3.093	72.212	63.629	2.5649E-03	2.8448E-03	0.440

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0013E-01 (SLUGS/FT2-SEC)

REPRODUCIBILITY OF THE ORIGINAL PAGE IN POOR

AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***													TEST NO. 195		RUN NO. 29		
WACH		RELMETER		REL		LENGTH(METER)		PT(ATM)		TT(DEG K)		HT(JOULE/KG)		RS(METER)		ORB ALONE	
5.22		3.79E 06		6.6211E 05		5.197		6.70		822.2		0.84697E 06		0.0018		0 - 30°, 8 - 0°	
5.22		1.0225E 06		6.6211E 05		0.645		98.51		1480.0		364.22		0.0060			
		G/QS		H/HS(1.000)		H/HS(0.900)		H/HS(0.850)		CHAN		T/C		HW/HT		Q/QS	
		H/HT		T/C		CHN		T/C		H/HT		Q/QS		H/HS(1.000)		H/HS(0.900)	
		1		2		3		4		5		6		7		8	
		0.370		0.0385		0.0101		0.0111		39		42		0.365		0.1611	
		0.359		0.0027		0.0032		0.0035		40		43		0.367		0.1727	
		0.369		0.0031		0.0036		0.0040		41		44		0.367		0.1662	
		0.369		0.0034		0.0040		0.0044		42		45		0.367		0.0216	
		0.369		0.0036		0.0043		0.0047		43		46		0.368		0.0080	
		0.369		0.0039		0.0046		0.0051		44		47		0.359		0.0000	
		0.368		0.0043		0.0051		0.0057		45		48		0.367		0.2351	
		0.367		0.0043		0.0051		0.0056		46		50		0.368		0.0156	
		0.366		0.0048		0.0057		0.0063		47		51		0.367		0.0044	
		0.365		0.0051		0.0060		0.0067		48		53		0.368		0.0025	
		0.366		0.0041		0.0049		0.0054		49		55		0.367		0.0024	
		0.366		0.0037		0.0043		0.0048		50		57		0.367		0.0029	
		0.366		0.0021		0.0025		0.0028		51		59		0.367		0.0040	
		0.365		0.0030		0.0036		0.0040		52		60		0.369		0.0068	
		0.365		0.0053		0.0063		0.0070		53		61		0.368		0.0038	
		0.366		0.0114		0.0135		0.0149		54		65		0.368		0.0037	
		0.365		0.0074		0.0088		0.0097		55		68		0.369		0.0067	
		0.367		0.0017		0.0020		0.0022		56		69		0.370		0.0052	
		0.368		0.0013		0.0016		0.0017		57		70		0.370		0.0055	
		0.366		0.0038		0.0046		0.0050		58		72		0.370		0.0063	
		0.365		0.0254		0.0301		0.0332		59		73		0.367		0.3044	
		0.365		0.0375		0.0445		0.0491		60		74		0.366		0.2391	
		0.402		0.0000		0.0000		0.0000		61		75		0.365		0.2115	
		0.366		0.0340		0.0424		0.0446		62		76		0.366		0.1561	
		0.366		0.0329		0.0390		0.0431		63		77		0.370		0.3166	
		0.368		0.1712		0.2112		0.2331		64		78		0.369		0.2251	
		0.366		0.0608		0.0721		0.0796		65		79		0.369		0.1870	
		0.366		0.0428		0.0508		0.0561		66		80		0.369		0.1553	
		0.368		0.1675		0.1990		0.2196		67		81		0.372		0.2622	
		0.366		0.0719		0.0853		0.0942		68		82		0.372		0.2471	
		0.366		0.1089		0.1292		0.1426		69		83		0.372		0.2149	
		0.368		0.1603		0.1904		0.2101		70		84		0.371		0.1754	
		0.365		0.1742		0.2067		0.2281		71		85		0.370		0.1471	
		0.402		0.0000		0.0000		0.0000		72		86		0.371		0.1862	
		0.367		0.1548		0.1838		0.2028		73		87		0.372		0.1267	
		0.366		0.2059		0.2444		0.2697		74		88		0.377		0.0656	
		0.368		0.1469		0.1745		0.1926		75		89		0.379		0.0369	
		0.369		0.2918		0.3468		0.3828									

PRECEDING PAGE BLANK NOT FILLED

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETT FIELD CALIF. *** PRELIMINARY DATA ***														TEST NO. 195	
														RUN NO. 29	

45	309.9	557.8	1.593	1.404	73.774	1.1427E-03	1.2611E-03	0.423
46	310.0	557.9	0.588	0.518	73.766	4.2195E-04	4.6548E-04	0.558
47	309.0	545.5	0.000	0.000	0.000	0.0000	0.0000	4.185
48	309.0	557.3	17.355	15.292	73.814	1.2440E-02	1.3728E-02	0.284
49	310.0	557.0	1.152	1.015	73.765	8.2613E-04	9.1175E-04	0.724
50	309.9	557.7	0.325	0.286	73.783	2.3289E-04	2.5701E-04	0.689
51	310.0	558.0	0.183	0.161	73.761	1.3126E-04	1.4487E-04	0.305
52	309.6	557.3	0.177	0.156	73.814	1.2712E-04	1.4028E-04	0.253
53	309.5	557.1	0.213	0.192	73.829	1.5255E-04	1.6835E-04	0.243
54	309.4	557.0	0.292	0.257	73.841	2.0923E-04	2.3089E-04	0.372
55	311.0	559.7	0.501	0.441	73.623	3.5986E-04	3.9725E-04	0.702
56	310.3	558.5	0.283	0.249	73.724	2.0320E-04	2.2427E-04	0.418
57	310.3	558.5	0.272	0.239	73.718	1.9499E-04	2.1522E-04	0.329
58	311.0	559.7	0.491	0.434	73.623	3.5427E-04	3.9107E-04	0.555
59	311.0	561.3	0.392	0.337	73.498	2.7540E-04	3.0408E-04	0.445
60	311.3	561.2	0.403	0.355	73.503	2.9000E-04	3.2019E-04	0.528
61	311.3	562.0	0.459	0.404	73.426	3.3096E-04	3.6546E-04	0.521
62	310.1	556.9	2.493	19.819	73.899	1.6105E-02	1.7770E-02	0.277
63	309.4	555.9	17.676	15.575	73.927	1.2648E-02	1.3955E-02	0.303
64	310.1	554.6	15.660	12.799	74.031	1.1188E-02	1.2342E-02	0.308
65	309.6	555.5	11.547	10.175	73.963	8.2590E-03	9.1110E-03	0.310
66	312.0	561.5	23.263	20.498	73.478	1.6763E-02	1.8509E-02	0.292
67	311.7	560.2	16.562	14.592	73.583	1.1914E-02	1.3153E-02	0.278
68	310.9	559.6	13.773	12.136	72.635	9.9043E-03	1.0929E-02	0.273
69	311.0	559.9	11.430	10.072	73.610	8.2193E-03	9.0735E-03	0.256
70	314.3	567.7	19.179	16.900	73.146	1.5389E-02	1.5347E-02	0.238
71	313.8	559.9	16.092	15.942	73.210	1.3091E-02	1.4461E-02	0.270
72	313.7	568.0	15.746	14.874	73.266	1.1383E-02	1.2573E-02	0.246
73	313.1	563.5	12.861	11.332	73.317	9.2902E-03	1.0260E-02	0.246
74	312.3	562.1	10.901	9.517	73.435	7.7878E-03	8.5995E-03	0.427
75	312.7	562.9	13.667	12.042	73.379	9.8629E-03	1.0892E-02	0.231
76	313.5	564.2	9.279	8.176	73.261	6.7089E-03	7.4103E-03	0.327
77	311.7	571.8	4.766	4.200	72.659	3.4785E-03	3.8460E-03	0.378
78	310.4	570.9	2.675	2.357	72.414	1.9596E-03	2.1675E-03	0.351

PERMEABILITY-VELOCITY PRODUCT = 1.9697E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

CHAN	T/C	TIME (SEC)	TIME (SEC)	Q (BTU/CM2)	Q (W/CM2)	Q (BTU/FT2-SEC)	Q (W/FT2-SEC)	ST (10.000)	ST (10.850)	TIME (SEC)
1	1	303.4	546.1	2.168	1.910	64.944	57.225	1.6900E-03	1.8741E-03	0.599
2	2	302.7	544.9	0.544	0.480	55.037	57.306	4.2370E-04	4.6978E-04	0.464
3	3	302.6	544.7	0.388	0.342	65.055	57.322	3.0207E-04	3.3491E-04	0.391
4	4	302.4	544.4	0.464	0.409	65.080	57.344	3.6126E-04	4.0052E-04	0.335
5	5	302.2	544.0	0.725	0.639	65.112	57.372	5.6267E-04	6.2488E-04	0.382
6	6	301.6	542.9	0.896	0.790	65.199	57.449	6.9560E-04	7.7101E-04	0.340
7	7	301.1	542.0	0.945	0.833	65.265	57.507	7.3283E-04	8.1218E-04	0.389
8	8	300.4	540.7	0.932	0.821	65.371	57.601	7.2109E-04	7.9900E-04	0.398
9	9	299.6	539.3	0.831	0.733	65.479	57.696	6.4216E-04	7.1140E-04	0.455
10	10	299.2	538.6	0.671	0.591	65.539	57.749	5.1757E-04	5.7331E-04	0.481
11	11	298.8	537.8	0.472	0.416	65.604	57.806	3.6363E-04	4.0274E-04	0.420
12	12	298.5	537.3	0.451	0.397	65.640	57.837	3.4704E-04	3.8434E-04	0.491
13	13	298.5	537.3	0.565	0.499	65.640	57.837	4.2616E-04	4.8304E-04	0.484
14	14	298.0	536.4	0.713	0.628	65.710	57.900	5.4847E-04	6.0734E-04	0.484
15	15	298.1	536.5	0.154	0.136	65.704	57.895	1.1869E-04	1.3143E-04	0.371
16	16	298.5	537.3	0.542	0.478	65.638	57.836	4.1750E-04	4.6238E-04	0.640
17	17	299.0	538.2	0.356	0.314	65.570	57.776	2.7465E-04	3.0421E-04	0.617
18	18	299.3	538.7	0.313	0.276	65.530	57.741	2.4181E-04	2.6735E-04	0.336
19	19	300.0	540.1	0.117	0.103	65.420	57.644	9.0431E-05	1.0019E-04	0.355
20	20	298.9	537.9	0.155	0.137	65.588	57.792	1.1952E-04	1.3238E-04	0.309
21	21	298.2	536.8	0.562	0.495	65.677	57.870	4.3259E-04	4.7905E-04	0.461
22	22	298.3	536.9	1.425	1.256	65.670	57.864	1.0970E-03	1.2149E-03	0.471
23	23	298.9	537.5	0.000	0.000	0.000	0.000	0.0000	0.0000	0.385
24	24	298.6	537.5	1.783	1.571	65.627	57.826	1.3735E-03	1.5212E-03	0.385
25	25	298.7	537.7	0.915	0.806	65.612	57.813	7.0499E-04	7.8080E-04	0.506
26	26	298.9	537.8	6.377	5.619	65.597	57.800	4.9149E-03	5.4436E-03	0.406
27	27	298.5	537.2	4.316	3.803	65.646	57.843	3.3237E-03	3.6309E-03	0.349
28	28	298.6	537.4	0.977	0.861	65.631	57.830	7.5248E-04	8.3337E-04	0.437
29	29	299.0	538.2	6.988	6.157	65.573	57.779	5.3879E-03	5.9678E-03	0.433
30	30	298.7	537.6	2.350	2.071	65.616	57.816	1.8105E-03	2.0052E-03	0.356
31	31	298.3	536.9	2.972	2.619	65.669	57.864	2.2878E-03	2.5336E-03	0.439
32	32	298.5	537.3	6.928	5.105	65.641	57.839	5.3355E-03	5.9089E-03	0.447
33	33	297.7	535.9	4.789	4.220	65.750	57.935	3.6812E-03	4.0760E-03	0.385
34	34	338.9	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	0.418
35	35	298.1	536.5	6.571	5.790	65.700	57.990	5.0551E-03	5.5978E-03	0.418
36	36	298.5	537.2	4.464	3.934	65.646	57.843	3.4377E-02	3.8072E-02	0.436
37	37	298.5	539.0	9.239	8.141	65.504	57.718	7.1324E-03	7.9010E-03	0.522
38	38	298.7	539.4	30.405	26.791	65.471	57.692	2.2484E-02	2.6016E-02	0.420
39	39	298.0	536.5	4.334	3.819	65.706	57.896	3.3344E-03	3.6920E-03	0.372
40	40	299.0	538.2	2.300	2.027	65.573	57.778	1.7733E-03	1.9642E-03	0.477
41	41	298.5	537.2	12.040	11.402	65.645	57.842	9.9641E-03	1.1035E-02	0.398

46	301.1	542.0	2.004	1.766	65.265	57.507	1.530E-03	1.7221E-03	0.486
47	301.0	541.8	0.559	0.492	65.281	57.522	4.3307E-04	4.7994E-04	0.550
48	300.9	541.6	0.000	0.000	0.000	0.000	0.0000	0.0000	0.837
49	300.8	541.4	25.066	0.000	65.532	57.742	2.1950E-02	2.4314E-02	0.327
50	300.7	541.2	0.465	0.000	65.539	57.625	4.0825E-04	4.5234E-04	0.805
51	300.6	541.0	0.528	0.465	65.519	57.653	2.1278E-04	2.3575E-04	0.673
52	300.5	540.8	0.275	0.243	65.419	57.609	1.2873E-04	1.4264E-04	0.459
53	300.4	540.6	0.164	0.147	65.380	57.609	1.2873E-04	1.4264E-04	0.161
54	300.3	540.4	0.118	0.104	65.447	57.667	9.1239E-05	1.0108E-04	0.103
55	300.2	540.2	0.061	0.054	65.500	57.714	4.7303E-05	5.2401E-05	0.381
56	300.1	540.0	0.173	0.153	65.560	57.767	1.3353E-04	1.4791E-04	0.528
57	300.0	539.8	0.066	0.065	65.211	57.460	5.2366E-04	5.9006E-04	0.452
58	299.9	539.6	0.321	0.283	65.270	57.512	2.4880E-04	2.7573E-04	0.335
59	299.8	539.4	0.128	0.113	65.358	57.590	9.8954E-05	1.0965E-04	0.522
60	299.7	539.2	0.332	0.292	65.383	57.611	2.5655E-04	2.8426E-04	0.454
61	299.6	539.0	0.519	0.413	65.057	57.324	4.5859E-04	5.0847E-04	0.472
62	299.5	538.8	0.468	0.413	65.087	57.350	3.6411E-04	4.0367E-04	0.499
63	299.4	538.6	0.328	0.289	65.136	57.393	2.5449E-04	2.8211E-04	0.359
64	299.3	538.4	8.878	7.823	65.578	57.783	6.8445E-03	7.5810E-03	0.375
65	299.2	538.2	5.767	5.091	65.628	57.927	4.4418E-03	4.9154E-03	0.371
66	299.1	538.0	5.647	4.976	65.711	57.900	4.3432E-03	4.8094E-03	0.359
67	299.0	537.8	6.975	6.146	65.679	57.871	5.3679E-03	5.9444E-03	0.366
68	298.9	537.6	9.747	8.589	65.223	57.470	7.5218E-03	8.3812E-03	0.334
69	298.8	537.4	6.155	5.423	65.318	57.554	4.7670E-03	5.2926E-03	0.343
70	298.7	537.2	6.432	5.845	65.403	57.629	5.1299E-03	5.6337E-03	0.339
71	298.6	537.0	7.255	6.393	65.444	57.665	5.6067E-03	6.2116E-03	0.378
72	298.5	536.8	11.805	10.402	65.473	57.659	9.2162E-03	1.0222E-02	0.382
73	298.4	536.6	7.872	6.846	65.014	57.237	6.1907E-03	6.7979E-03	0.340
74	298.3	536.4	7.779	6.854	65.058	57.325	6.0522E-03	6.7102E-03	0.307
75	298.2	536.2	8.023	7.070	65.125	57.384	6.2352E-03	6.9122E-03	0.399
76	298.1	536.0	9.828	8.854	65.153	57.399	7.6355E-03	8.4622E-03	0.363
77	298.0	535.8	10.564	9.570	65.053	57.321	8.4538E-03	9.3722E-03	0.424
78	297.9	535.6	5.335	4.710	64.887	57.174	4.1622E-03	4.6175E-03	0.510
79	297.8	535.4	5.424	4.872	64.460	56.703	3.4737E-03	3.8614E-03	0.369
80	297.7	535.2	2.923	2.576	64.215	56.562	2.3089E-03	2.5541E-03	

RELATIVE VELOCITY PRODUCT = 2.0602E-01 (SUNGS/VEL SEC)

*** PRELIMINARY DATA ***

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. TEST NO. 195
 RUN NO. 31

WACH RE/METER 3.2074E 06 6.3057E 05 0.197 6.87 800.6 0.88929E 06 0.0018 RS(METER) ET ALONE
 PACA RE/FT 9.7762E 05 8.3057E 05 0.645 101.05 1549.1 382.42 0.0060 RS(FT) $\alpha = -30^\circ$, $\beta = 0^\circ$

CHAN	T/C	W/HT	C/S	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	W/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.364	0.3301	0.3301	0.3917	0.4320	39	51	0.349	0.0123	0.0123	0.0145	0.0160
2	2	0.363	0.3135	0.3135	0.3719	0.4102	40	54	0.347	0.0692	0.0692	0.0817	0.0892
3	3	0.363	0.3077	0.3077	0.3650	0.4025	41	55	0.346	0.0687	0.0687	0.0811	0.0888
4	4	0.361	0.2459	0.2459	0.2915	0.3213	42	56	0.347	0.0668	0.0668	0.0789	0.0868
5	5	0.361	0.2215	0.2215	0.2626	0.2894	43	57	0.348	0.0462	0.0462	0.0546	0.0600
6	6	0.359	0.1917	0.1917	0.2272	0.2503	44	58	0.348	0.0263	0.0263	0.0311	0.0342
7	7	0.358	0.1690	0.1690	0.2002	0.2206	45	60	0.346	0.0699	0.0699	0.0825	0.0907
8	8	0.356	0.1414	0.1414	0.1674	0.1844	46	61	0.347	0.0695	0.0695	0.0821	0.0902
9	9	0.354	0.1057	0.1057	0.1251	0.1377	47	62	0.347	0.0663	0.0663	0.0783	0.0861
10	10	0.353	0.0828	0.0828	0.1098	0.1209	48	63	0.348	0.0478	0.0478	0.0565	0.0621
11	11	0.352	0.0828	0.0828	0.0979	0.1077	49	64	0.348	0.0269	0.0269	0.0317	0.0349
12	12	0.349	0.0717	0.0717	0.0847	0.0932	50	65	0.349	0.0118	0.0118	0.0140	0.0154
13	13	0.349	0.0174	0.0174	0.0205	0.0226	51	66	0.349	0.0039	0.0039	0.0046	0.0051
14	14	0.347	0.0609	0.0609	0.0719	0.0791	52	67	0.348	0.0047	0.0047	0.0056	0.0061
15	15	0.347	0.0594	0.0594	0.0702	0.0771	53	68	0.346	0.0115	0.0115	0.0135	0.0149
16	16	0.348	0.0419	0.0419	0.0495	0.0544	54	70	0.347	0.0714	0.0714	0.0844	0.0927
17	17	0.349	0.0252	0.0252	0.0297	0.0327	55	71	0.347	0.0635	0.0635	0.0750	0.0825
18	18	0.349	0.0120	0.0120	0.0141	0.0155	56	72	0.348	0.0470	0.0470	0.0555	0.0611
19	19	0.347	0.0638	0.0638	0.0753	0.0828	57	73	0.348	0.0259	0.0259	0.0306	0.0336
20	20	0.349	0.0418	0.0418	0.0494	0.0543	58	77	0.347	0.0714	0.0714	0.0843	0.0926
21	21	0.346	0.0642	0.0642	0.0757	0.0823	59	78	0.348	0.0652	0.0652	0.0770	0.0847
22	22	0.348	0.0580	0.0580	0.0685	0.0753	60	79	0.348	0.0478	0.0478	0.0564	0.0621
23	23	0.348	0.0434	0.0434	0.0513	0.0564	61	81	0.348	0.0117	0.0117	0.0138	0.0152
24	24	0.349	0.0271	0.0271	0.0320	0.0352	62	84	0.347	0.0704	0.0704	0.0831	0.0914
25	25	0.349	0.0135	0.0135	0.0159	0.0175	63	85	0.347	0.0660	0.0660	0.0780	0.0857
26	26	0.349	0.0045	0.0045	0.0053	0.0058	64	86	0.347	0.0488	0.0488	0.0577	0.0634
27	27	0.349	0.0016	0.0016	0.0018	0.0020	65	90	0.346	0.0704	0.0704	0.0831	0.0914
28	28	0.346	0.0132	0.0132	0.0156	0.0172	66	91	0.347	0.0659	0.0659	0.0778	0.0856
29	29	0.347	0.0639	0.0639	0.0755	0.0830	67	92	0.347	0.0484	0.0484	0.0572	0.0628
30	30	0.347	0.0647	0.0647	0.0764	0.0840	68	94	0.350	0.0123	0.0123	0.0146	0.0160
31	31	0.348	0.0629	0.0629	0.0743	0.0818	69	98	0.347	0.0723	0.0723	0.0853	0.0938
32	32	0.348	0.0434	0.0434	0.0513	0.0564	70	99	0.347	0.0658	0.0658	0.0777	0.0854
33	33	0.349	0.0258	0.0258	0.0305	0.0335	71	100	0.347	0.0485	0.0485	0.0573	0.0630
34	34	0.334	0.0000	0.0000	0.0000	0.0000	72	103	0.347	0.0682	0.0682	0.0805	0.0885
35	35	0.347	0.0701	0.0701	0.0828	0.0910	73	104	0.347	0.0630	0.0630	0.0744	0.0818
36	36	0.348	0.0660	0.0660	0.0779	0.0857	74	105	0.347	0.0462	0.0462	0.0545	0.0600
37	37	0.348	0.0471	0.0471	0.0556	0.0611	75	107	0.348	0.0143	0.0143	0.0169	0.0186
38	38	0.349	0.0280	0.0280	0.0331	0.0364							

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER HOFFETT FIELD CALIF. *** PRELIMINARY DATA ***														TEST NO. 195	
WACH														RUN NO. 31	
5.22	3.2074E 06	6.3057E 05	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)								
5.22	9.7762E 05	6.3057E 05	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)								
CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(N/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.850)	ST(0.900)	ST(0.950)	ST(0.975)	ST(0.990)	TIME(SEC)		
1	1	322.5	580.5	26.056	22.959	78.939	69.556	1.7768E-02	1.7957E-02	1.8146E-02	1.8335E-02	1.8524E-02	0.282		
2	2	321.8	579.3	24.779	21.833	79.038	69.643	1.6873E-02	1.7062E-02	1.7251E-02	1.7440E-02	1.7629E-02	0.290		
3	3	321.4	578.4	24.343	21.450	79.110	69.706	1.6559E-02	1.6748E-02	1.6937E-02	1.7126E-02	1.7315E-02	0.348		
4	4	320.0	576.0	19.497	17.180	79.306	69.879	1.3226E-02	1.3415E-02	1.3604E-02	1.3793E-02	1.3982E-02	0.386		
5	5	319.5	575.1	17.582	15.492	79.381	69.946	1.1913E-02	1.2102E-02	1.2291E-02	1.2480E-02	1.2669E-02	0.392		
6	6	318.2	572.7	15.255	13.442	79.575	70.116	1.0308E-02	1.0497E-02	1.0686E-02	1.0875E-02	1.1064E-02	0.397		
7	7	317.1	570.7	13.479	11.877	79.739	70.261	9.0869E-03	9.2760E-03	9.4651E-03	9.6542E-03	9.8433E-03	0.384		
8	8	315.4	567.8	11.309	9.965	79.975	70.469	7.5986E-03	7.7877E-03	7.9768E-03	8.1659E-03	8.3550E-03	0.395		
9	9	313.9	565.0	8.477	7.470	80.203	70.670	5.6773E-03	5.8664E-03	6.0555E-03	6.2446E-03	6.4337E-03	0.406		
10	10	312.7	562.9	7.462	6.575	80.375	70.822	4.9853E-03	5.1744E-03	5.3635E-03	5.5526E-03	5.7417E-03	0.378		
11	11	311.3	560.4	6.670	5.877	80.579	71.001	4.4434E-03	4.6325E-03	4.8216E-03	5.0107E-03	5.1998E-03	0.373		
12	12	309.3	556.8	5.798	5.109	80.870	71.257	3.8471E-03	4.0362E-03	4.2253E-03	4.4144E-03	4.6035E-03	0.347		
13	13	309.1	556.4	5.109	4.420	80.899	71.283	3.3214E-04	3.5105E-04	3.6996E-04	3.8887E-04	4.0778E-04	0.322		
14	14	307.2	552.9	4.944	4.356	81.183	71.533	3.2656E-03	3.4547E-03	3.6438E-03	3.8329E-03	4.0220E-03	0.376		
15	15	307.1	552.8	4.825	4.232	81.196	71.545	3.1869E-03	3.3760E-03	3.5651E-03	3.7542E-03	3.9433E-03	0.383		
16	16	308.3	555.0	3.396	2.992	81.018	71.388	2.4283E-03	2.6174E-03	2.8065E-03	2.9956E-03	3.1847E-03	0.362		
17	17	308.9	556.0	2.037	1.794	80.934	71.314	1.3499E-03	1.5390E-03	1.7281E-03	1.9172E-03	2.1063E-03	0.358		
18	18	309.0	556.2	0.568	0.853	80.918	71.300	6.4170E-04	6.6061E-04	6.7952E-04	6.9843E-04	7.1734E-04	0.361		
19	19	307.4	553.3	5.175	4.560	81.157	71.510	3.4195E-03	3.6086E-03	3.7977E-03	3.9868E-03	4.1759E-03	0.369		
20	20	308.7	555.6	3.383	2.981	80.965	71.341	2.2412E-03	2.4303E-03	2.6194E-03	2.8085E-03	2.9976E-03	0.355		
21	21	306.8	552.2	5.212	4.592	81.244	71.587	3.4400E-03	3.6291E-03	3.8182E-03	4.0073E-03	4.1964E-03	0.367		
22	22	308.0	554.4	4.701	4.143	81.067	71.431	3.1106E-03	3.3007E-03	3.4908E-03	3.6809E-03	3.8710E-03	0.372		
23	23	308.5	555.2	3.515	3.097	80.995	71.368	2.3280E-03	2.5171E-03	2.7062E-03	2.8953E-03	3.0844E-03	0.361		
24	24	309.1	556.3	2.192	1.932	80.908	71.291	1.4537E-03	1.6428E-03	1.8319E-03	2.0210E-03	2.2101E-03	0.367		
25	25	309.1	556.4	1.088	0.959	80.858	71.282	7.2177E-04	7.4068E-04	7.5959E-04	7.7850E-04	7.9741E-04	0.345		
26	26	309.2	556.6	0.363	0.319	80.884	71.270	2.4047E-04	2.5938E-04	2.7829E-04	2.9720E-04	3.1611E-04	0.352		
27	27	308.7	555.7	0.126	0.111	80.961	71.337	8.3611E-05	8.5502E-05	8.7393E-05	8.9284E-05	9.1175E-05	0.288		
28	28	306.2	551.2	1.076	0.948	81.325	71.658	7.0925E-04	7.2816E-04	7.4707E-04	7.6598E-04	7.8489E-04	0.387		
29	29	307.0	552.6	5.192	4.575	81.210	71.557	3.4286E-03	3.6177E-03	3.8068E-03	3.9959E-03	4.1850E-03	0.360		
30	30	307.2	552.9	5.255	4.630	81.186	71.536	3.4708E-03	3.6599E-03	3.8490E-03	4.0381E-03	4.2272E-03	0.372		
31	31	308.1	554.6	5.102	4.495	81.048	71.414	3.3763E-03	3.5654E-03	3.7545E-03	3.9436E-03	4.1327E-03	0.371		
32	32	308.5	555.3	3.514	3.097	80.989	71.362	2.3278E-03	2.5169E-03	2.7060E-03	2.8951E-03	3.0842E-03	0.356		
33	33	309.1	556.3	2.088	1.840	80.968	71.291	1.3844E-03	1.5735E-03	1.7626E-03	1.9517E-03	2.1408E-03	0.361		
34	34	306.2	553.1	0.000	0.000	80.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.728		
35	35	307.1	552.8	5.694	5.017	81.197	71.546	3.7604E-03	3.9495E-03	4.1386E-03	4.3277E-03	4.5168E-03	0.378		
36	36	308.0	554.5	5.347	4.711	81.059	71.424	3.5380E-03	3.7271E-03	3.9162E-03	4.1053E-03	4.2944E-03	0.374		
37	37	308.4	555.0	3.813	3.360	81.012	71.383	2.5246E-03	2.7137E-03	2.9028E-03	3.0919E-03	3.2810E-03	0.369		
38	38	308.9	556.0	2.270	2.000	80.933	71.313	1.5048E-03	1.6939E-03	1.8830E-03	2.0721E-03	2.2612E-03	0.364		
39	39	309.3	556.8	0.995	0.876	80.871	71.258	6.5987E-04	6.7878E-04	6.9769E-04	7.1660E-04	7.3551E-04	0.340		
40	40	307.2	552.9	5.618	4.950	81.183	71.533	3.7110E-03	3.9001E-03	4.0892E-03	4.2783E-03	4.4674E-03	0.384		
41	41	306.6	551.8	5.585	4.921	81.274	71.614	3.6848E-03	3.8739E-03	4.0630E-03	4.2521E-03	4.4412E-03	0.387		

42	56	307.5	553.5	5.423	4.775	81.137	71.492	3.5848E-03	3.9413E-03	0.460
43	57	308.1	554.6	3.747	3.301	81.046	71.413	2.4796E-03	2.7266E-03	0.375
44	58	308.3	555.0	2.132	1.878	81.018	71.388	1.4114E-03	1.5521E-03	0.359
45	59	308.6	551.9	5.681	5.006	81.266	71.606	3.7486E-03	4.1205E-03	0.385
46	60	307.2	552.9	5.642	4.972	81.187	71.537	3.7269E-03	4.0973E-03	0.383
47	61	307.6	553.7	5.378	4.739	81.119	71.477	3.5560E-03	3.9098E-03	0.371
48	62	308.1	554.6	3.877	3.416	81.044	71.411	2.5622E-03	2.8217E-03	0.378
49	63	309.5	555.2	2.176	1.918	80.997	71.369	1.4414E-03	1.5850E-03	0.368
50	64	308.7	555.1	0.958	0.844	80.959	71.336	6.3467E-04	6.9797E-04	0.350
51	65	308.6	555.5	0.316	0.279	80.971	71.347	2.0959E-04	2.3049E-04	0.294
52	66	308.1	554.7	0.382	0.336	81.044	71.411	2.5274E-04	2.7791E-04	0.356
53	67	308.0	551.9	0.932	0.821	81.271	71.111	6.1505E-04	6.7610E-04	0.421
54	68	308.8	552.3	5.804	5.114	81.233	71.577	3.8312E-03	4.2117E-03	0.377
55	69	307.5	553.5	5.155	4.542	81.136	71.492	3.4075E-03	3.7444E-03	0.375
56	70	307.8	554.1	3.813	3.360	81.052	71.453	2.5218E-03	2.7728E-03	0.372
57	71	308.3	554.9	2.098	1.849	81.024	71.393	1.3890E-03	1.5274E-03	0.366
58	72	307.0	552.7	5.796	5.107	81.206	71.554	3.8272E-03	4.2074E-03	0.372
59	73	307.7	553.9	5.287	4.655	81.103	71.463	3.4965E-03	3.8445E-03	0.366
60	74	308.0	554.3	3.874	3.413	81.071	71.434	2.5627E-03	2.8179E-03	0.368
61	75	309.2	554.8	0.948	0.835	81.029	71.398	6.2729E-04	6.8978E-04	0.351
62	76	307.1	552.7	5.715	5.036	81.200	71.548	3.7744E-03	4.1455E-03	0.372
63	77	307.3	553.2	5.358	4.721	81.162	71.515	3.5406E-03	3.8927E-03	0.368
64	78	307.6	553.8	3.961	3.490	81.116	71.474	2.6188E-03	2.8794E-03	0.371
65	79	306.6	551.9	5.722	5.042	81.265	71.605	3.7755E-03	4.1503E-03	0.365
66	80	307.3	553.2	5.350	4.714	81.162	71.515	3.5351E-03	3.8866E-03	0.377
67	81	307.7	553.8	3.926	3.459	81.115	71.473	2.5959E-03	2.8542E-03	0.356
68	82	310.1	558.1	0.994	0.876	80.763	71.163	6.6078E-04	7.2688E-04	0.460
69	83	306.9	552.5	5.869	5.172	81.218	71.564	3.8751E-03	4.2600E-03	0.356
70	84	307.3	553.2	5.338	4.704	81.163	71.516	3.5272E-03	3.8779E-03	0.357
71	85	307.5	553.6	3.938	3.470	81.131	71.487	2.6030E-03	2.8619E-03	0.348
72	86	307.0	552.6	5.535	4.880	81.209	71.556	3.6574E-03	4.0208E-03	0.361
73	87	307.4	553.3	5.113	4.505	81.153	71.507	3.3786E-03	3.7146E-03	0.354
74	88	307.3	553.1	3.749	3.304	81.173	71.524	2.4771E-03	2.7234E-03	0.357
75	89	307.7	553.9	1.162	1.024	81.101	71.461	7.6849E-04	8.4496E-04	0.328

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9603E-01 (SI UG5/FI2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AVES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 195			
MACH		RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEC K)	HT(JOULE/KG)	PS(METER)	FLY NO. 32						ET ALONE			
5.22		3.4676E 06	6.8172E 05	0.197	7.19	842.6	0.8694E 06	0.0018										
MACH		REL	LENGTH(FT)	PT(PSI)	TT(DEC R)	HT(FTU/LBN)	PS(FT)											
5.22		1.0569E 06	6.8172E 05	0.645	105.62	1516.7	373.87							$\alpha = -60^\circ, \beta = 0^\circ$				
CHAN	T/C	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)									
1	1	0.362	0.1834	0.2398	39	51	0.354	0.0220	0.0260									
2	2	0.362	0.2241	0.2657	40	54	0.355	0.1302	0.1302									
3	3	0.362	0.2524	0.2993	41	55	0.354	0.1260	0.1260									
4	4	0.361	0.2451	0.2906	42	56	0.355	0.1229	0.1229									
5	5	0.361	0.2337	0.2770	43	57	0.355	0.0851	0.0851									
6	6	0.360	0.2228	0.2641	44	58	0.354	0.0481	0.0481									
7	7	0.360	0.2135	0.2530	45	60	0.355	0.1265	0.1265									
8	8	0.359	0.1942	0.2301	46	61	0.355	0.1249	0.1249									
9	9	0.358	0.1633	0.1934	47	62	0.355	0.1191	0.1191									
10	10	0.358	0.1541	0.1825	48	63	0.355	0.0853	0.0853									
11	11	0.357	0.1527	0.1808	49	64	0.354	0.0471	0.0471									
12	12	0.355	0.1446	0.1711	50	65	0.354	0.0198	0.0198									
13	13	0.353	0.0202	0.0239	51	66	0.353	0.0061	0.0061									
14	14	0.355	0.1432	0.1695	52	67	0.353	0.0045	0.0045									
15	15	0.355	0.1392	0.1648	53	68	0.353	0.0068	0.0068									
16	16	0.355	0.0926	0.1096	54	70	0.355	0.1279	0.1279									
17	17	0.355	0.0495	0.0586	55	71	0.355	0.1128	0.1128									
18	18	0.354	0.0191	0.0226	56	72	0.355	0.0827	0.0827									
19	19	0.355	0.1450	0.1716	57	73	0.354	0.0443	0.0443									
20	20	0.355	0.0916	0.1084	58	77	0.355	0.1273	0.1273									
21	21	0.355	0.1419	0.1679	59	78	0.355	0.1158	0.1158									
22	22	0.356	0.1279	0.1514	60	79	0.355	0.0828	0.0828									
23	23	0.355	0.0940	0.1112	61	81	0.353	0.0193	0.0193									
24	24	0.355	0.0546	0.0646	62	84	0.355	0.1271	0.1271									
25	25	0.354	0.0231	0.0273	63	85	0.355	0.1173	0.1173									
26	26	0.354	0.0055	0.0065	64	86	0.355	0.0846	0.0846									
27	27	0.353	0.0043	0.0051	65	90	0.355	0.1292	0.1292									
28	28	0.351	0.0089	0.0106	66	91	0.355	0.1193	0.1193									
29	29	0.355	0.1362	0.1612	67	92	0.355	0.0843	0.0843									
30	30	0.355	0.1334	0.1579	68	94	0.356	0.0197	0.0197									
31	31	0.356	0.1299	0.1537	69	98	0.355	0.1343	0.1343									
32	32	0.355	0.0892	0.1055	70	99	0.355	0.1204	0.1204									
33	33	0.355	0.0516	0.0607	71	100	0.355	0.0859	0.0859									
34	34	0.344	0.0300	0.0355	72	103	0.355	0.1281	0.1281									
35	35	0.355	0.1356	0.1555	73	104	0.356	0.1180	0.1180									
36	36	0.356	0.1285	0.1555	74	105	0.355	0.0841	0.0841									
37	37	0.355	0.0906	0.1073	75	107	0.354	0.0235	0.0235									
38	38	0.355	0.0534	0.0632	76													

42	50	317.4	553.3	9.830	8.662	80.012	70.502	6.4135E-03	7.111E-03	0.474
43	51	317.3	553.2	6.814	6.004	80.024	70.512	4.4135E-03	4.8593E-03	0.400
44	52	306.5	551.8	3.853	3.395	80.141	70.615	2.5915E-03	2.7427E-03	0.401
45	53	306.9	552.4	10.129	8.925	80.089	70.570	6.5547E-03	7.2161E-03	0.397
46	54	307.4	553.2	9.990	8.803	80.018	70.507	6.4714E-03	7.1252E-03	0.395
47	55	307.5	553.4	9.532	8.399	80.003	70.434	6.1765E-03	6.8051E-03	0.391
48	56	307.3	553.2	6.326	6.015	80.020	70.508	4.4216E-03	4.8645E-03	0.388
49	57	306.7	552.0	3.776	3.327	80.121	70.598	2.4425E-03	2.9889E-03	0.387
50	58	306.1	551.0	1.585	1.396	80.203	70.669	1.6237E-03	1.1268E-03	0.385
51	59	305.7	550.2	0.499	0.431	80.268	70.727	3.1541E-04	2.4715E-04	0.383
52	60	305.4	549.7	0.358	0.315	80.315	70.769	2.5665E-04	2.5384E-04	0.371
53	61	304.4	547.9	0.545	0.420	80.466	70.901	3.5087E-04	3.8607E-04	0.369
54	62	307.2	553.0	10.239	9.022	80.041	70.527	6.6306E-03	7.3002E-03	0.390
55	63	307.5	553.5	9.027	7.954	79.995	70.487	5.8491E-02	6.4403E-03	0.383
56	64	307.2	552.9	6.616	5.830	80.047	70.532	4.2839E-03	4.7165E-03	0.390
57	65	306.6	551.9	3.546	3.124	80.132	70.608	2.2932E-03	2.5245E-03	0.389
58	66	307.3	553.1	10.190	8.979	80.031	70.518	6.5993E-03	7.2559E-03	0.382
59	67	307.1	553.8	9.261	8.160	79.973	70.467	6.6029E-03	6.6097E-03	0.377
60	68	307.2	553.0	6.629	5.840	80.041	70.527	4.2918E-03	4.7252E-03	0.380
61	69	305.9	550.6	1.551	1.366	80.238	70.700	1.0014E-03	1.1022E-03	0.386
62	70	307.3	553.2	10.171	8.962	80.125	70.513	6.5818E-03	7.2533E-03	0.383
63	71	307.3	553.2	9.398	8.272	80.024	70.512	6.0809E-03	6.6950E-03	0.374
64	72	307.0	552.6	6.714	5.969	80.068	70.550	4.3847E-03	4.8273E-03	0.381
65	73	307.1	552.2	10.241	9.112	80.050	70.535	6.6535E-03	7.3714E-03	0.379
66	74	307.6	553.6	9.540	8.406	79.989	70.481	6.1824E-03	6.8072E-03	0.398
67	75	307.2	552.9	6.752	5.949	80.046	70.531	4.3718E-03	4.8132E-03	0.381
68	76	308.1	554.1	1.574	1.387	79.904	70.407	1.1213E-03	1.1247E-03	0.474
69	77	307.5	553.5	10.741	9.465	79.998	70.489	6.9599E-03	7.6632E-03	0.378
70	78	307.6	553.1	9.630	8.485	79.986	70.479	6.2409E-03	6.9716E-03	0.374
71	79	307.1	552.9	6.878	6.060	80.049	70.534	4.4532E-03	4.9029E-03	0.367
72	80	307.4	553.3	10.251	9.032	80.014	70.503	6.6404E-03	7.3113E-03	0.378
73	81	307.8	554.1	9.436	8.314	79.945	70.443	6.1186E-03	6.7374E-03	0.370
74	82	307.2	552.9	6.735	5.935	80.048	70.533	4.2612E-03	4.8215E-03	0.385
75	83	306.2	551.1	1.884	1.660	80.197	70.665	1.2172E-03	1.3398E-03	0.371

FREE-SURFACE DENSITY-VELOCITY PRODUCT = 2.0752E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***													
MACH		RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195				
5.22	3.2798E 06	6.4479E 05	0.197	6.85	847.3	0.87454E 06	0.0018	RUN NO.	33				
MACH		RE/FT	REL LENGTH(FT)	PT(PST)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET ALONE					
5.22	9.9968E 05	6.4479E 05	0.645	100.74	1525.1	376.07	0.0060	a = 0°, B = 0°					
CHAN	T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.376	0.3854	0.3854	0.4588	0.5072	39	51	0.362	0.0065	0.0055	0.0077	0.0085
2	2	0.375	0.2723	0.2723	0.3241	0.3582	40	54	0.357	0.0058	0.0059	0.0069	0.0075
3	3	0.374	0.2294	0.2294	0.2730	0.3017	41	55	0.356	0.0059	0.0059	0.0070	0.0078
4	4	0.372	0.1473	0.1473	0.1752	0.1935	42	56	0.358	0.0063	0.0063	0.0075	0.0082
5	5	0.372	0.1255	0.1255	0.1492	0.1658	43	57	0.360	0.0060	0.0060	0.0071	0.0078
6	6	0.370	0.0960	0.0960	0.1141	0.1260	44	58	0.361	0.0060	0.0060	0.0070	0.0078
7	7	0.369	0.0740	0.0740	0.0880	0.0971	45	60	0.356	0.0060	0.0060	0.0070	0.0078
8	8	0.367	0.0540	0.0540	0.0642	0.0708	46	61	0.357	0.0057	0.0057	0.0067	0.0074
9	9	0.365	0.0348	0.0348	0.0414	0.0456	47	62	0.358	0.0064	0.0064	0.0075	0.0082
10	10	0.364	0.0264	0.0264	0.0314	0.0346	48	63	0.360	0.0056	0.0056	0.0067	0.0074
11	11	0.362	0.0200	0.0200	0.0237	0.0261	49	64	0.361	0.0058	0.0058	0.0069	0.0076
12	12	0.360	0.0147	0.0147	0.0174	0.0192	50	65	0.361	0.0061	0.0061	0.0072	0.0080
13	13	0.361	0.0133	0.0133	0.0158	0.0174	51	66	0.361	0.0061	0.0061	0.0072	0.0079
14	14	0.357	0.0083	0.0083	0.0108	0.0118	52	67	0.361	0.0061	0.0061	0.0073	0.0080
15	15	0.357	0.0073	0.0073	0.0086	0.0095	53	68	0.360	0.0065	0.0065	0.0077	0.0085
16	16	0.360	0.0078	0.0078	0.0092	0.0101	54	70	0.357	0.0056	0.0056	0.0066	0.0073
17	17	0.361	0.0076	0.0076	0.0090	0.0100	55	71	0.358	0.0054	0.0054	0.0064	0.0070
18	18	0.362	0.0077	0.0077	0.0092	0.0101	56	72	0.359	0.0051	0.0051	0.0061	0.0067
19	19	0.362	0.0074	0.0074	0.0087	0.0096	57	73	0.360	0.0052	0.0052	0.0061	0.0068
20	20	0.360	0.0075	0.0075	0.0088	0.0097	58	77	0.357	0.0048	0.0048	0.0057	0.0062
21	21	0.357	0.0071	0.0071	0.0084	0.0092	59	78	0.359	0.0045	0.0045	0.0054	0.0059
22	22	0.359	0.0071	0.0071	0.0084	0.0092	60	79	0.360	0.0043	0.0043	0.0051	0.0056
23	23	0.360	0.0072	0.0072	0.0085	0.0094	61	81	0.361	0.0048	0.0048	0.0057	0.0063
24	24	0.361	0.0077	0.0077	0.0092	0.0101	62	84	0.357	0.0035	0.0035	0.0041	0.0045
25	25	0.362	0.0077	0.0077	0.0091	0.0100	63	85	0.358	0.0033	0.0033	0.0040	0.0044
26	26	0.362	0.0071	0.0071	0.0084	0.0093	64	86	0.359	0.0031	0.0031	0.0037	0.0041
27	27	0.362	0.0071	0.0071	0.0084	0.0092	65	90	0.356	0.0029	0.0029	0.0034	0.0038
28	28	0.359	0.0073	0.0073	0.0087	0.0095	66	91	0.358	0.0031	0.0031	0.0037	0.0041
29	29	0.357	0.0068	0.0068	0.0081	0.0089	67	92	0.360	0.0033	0.0033	0.0039	0.0043
30	30	0.357	0.0063	0.0063	0.0074	0.0082	68	94	0.361	0.0032	0.0032	0.0038	0.0042
31	31	0.356	0.0058	0.0058	0.0081	0.0089	69	98	0.357	0.0045	0.0045	0.0053	0.0059
32	32	0.360	0.0066	0.0066	0.0078	0.0086	70	99	0.358	0.0047	0.0047	0.0054	0.0062
33	33	0.362	0.0066	0.0066	0.0079	0.0087	71	100	0.360	0.0046	0.0046	0.0054	0.0059
34	34	0.356	0.0060	0.0060	0.0080	0.0088	72	103	0.357	0.0066	0.0066	0.0078	0.0085
35	35	0.357	0.0064	0.0064	0.0076	0.0084	73	104	0.359	0.0066	0.0066	0.0078	0.0086
36	36	0.359	0.0066	0.0066	0.0078	0.0086	74	105	0.359	0.0061	0.0061	0.0073	0.0080
37	37	0.360	0.0065	0.0065	0.0077	0.0085	75	107	0.361	0.0055	0.0055	0.0065	0.0071
38	38	0.361	0.0067	0.0067	0.0080	0.0088	76						

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42	50	311.9	561.5	0.493	0.435	78.250	68.940	3.3598E-04	3.1014E-04	0.435
43	57	313.3	563.9	0.466	0.410	78.055	68.777	3.1797E-04	3.5040E-04	0.347
44	58	313.9	565.1	0.467	0.411	77.955	68.689	3.1934E-04	3.5185E-04	0.334
45	60	310.2	558.4	0.467	0.412	78.500	69.169	3.1709E-04	3.4920E-04	0.380
46	61	310.8	559.4	0.443	0.391	78.414	69.092	3.0123E-04	3.3178E-04	0.354
47	62	312.0	561.5	0.497	0.438	78.234	68.942	3.2870E-04	3.7318E-04	0.414
48	63	313.2	563.7	0.441	0.398	78.065	68.786	3.0076E-04	3.3143E-04	0.328
49	64	314.1	565.3	0.454	0.400	77.938	68.674	3.1040E-04	3.4212E-04	0.321
50	65	314.6	566.3	0.474	0.418	77.859	68.604	3.2458E-04	3.5779E-04	0.329
51	66	314.7	566.5	0.471	0.415	77.840	68.587	3.2258E-04	3.5560E-04	0.280
52	67	314.7	566.4	0.478	0.421	77.851	68.597	3.2759E-04	3.6111E-04	0.289
53	68	313.3	563.2	0.506	0.446	78.049	68.772	3.4565E-04	3.9089E-04	0.292
54	70	310.5	559.0	0.439	0.387	78.433	69.128	2.9820E-04	3.2842E-04	0.355
55	71	312.0	561.6	0.420	0.370	78.222	68.942	2.8571E-04	3.1476E-04	0.341
56	72	312.9	563.3	0.402	0.354	78.104	68.820	2.7399E-04	3.0191E-04	0.342
57	73	313.9	564.9	0.404	0.356	77.968	68.701	2.7609E-04	3.0329E-04	0.338
58	74	313.9	564.1	0.375	0.331	78.438	69.115	2.5474E-04	2.8056E-04	0.324
59	78	312.2	561.2	0.354	0.314	78.215	68.918	2.4240E-04	2.6706E-04	0.290
60	79	313.1	563.6	0.333	0.293	78.077	68.797	2.2720E-04	2.5034E-04	0.272
61	91	314.2	565.5	0.376	0.331	77.920	68.658	2.5719E-04	2.8347E-04	0.302
62	92	315.9	569.5	0.275	0.209	78.404	69.085	1.8456E-04	2.0728E-04	0.233
63	95	311.9	561.5	0.262	0.231	78.243	68.948	1.7823E-04	1.9832E-04	0.224
64	98	312.9	563.2	0.244	0.215	78.107	68.823	1.6616E-04	1.8310E-04	0.139
65	99	310.4	558.7	0.228	0.201	78.479	69.150	1.5448E-04	1.7012E-04	0.177
70	91	311.8	561.3	0.245	0.216	78.265	68.962	1.6682E-04	1.8377E-04	0.168
71	92	313.0	563.5	0.256	0.225	78.087	68.806	1.7461E-04	1.9240E-04	0.161
72	93	312.3	565.7	0.252	0.222	77.911	68.650	1.7265E-04	1.9220E-04	0.237
73	94	312.6	559.4	0.352	0.311	78.418	69.097	2.2937E-04	2.6365E-04	0.202
74	99	312.1	561.8	0.371	0.327	78.226	68.928	2.5288E-04	2.7850E-04	0.247
75	100	313.1	562.6	0.326	0.213	78.079	68.798	2.4275E-04	2.6750E-04	0.198
76	103	311.0	559.8	0.514	0.453	78.383	69.044	3.4907E-04	3.9423E-04	0.317
77	104	312.3	562.2	0.515	0.454	78.191	68.897	3.5088E-04	3.9670E-04	0.345
78	105	313.0	563.3	0.470	0.422	78.100	68.916	3.2714E-04	3.6043E-04	0.339
79	107	314.2	565.5	0.426	0.375	77.922	68.660	2.9121E-04	3.2097E-04	0.234

PERF-ST-PM DENSITY-VELOCITY PRODUCT = 1.9741E-01 (SIUGS/EI2 SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 34

RS(METER)

HT(JOULE/KG)

TT(DEG K)

PT(ATM)

REL LENGTH(METER)

REL LENGTH(FT)

REL LENGTH(FT)

REL LENGTH(FT)

RS(FT)

HT(FT)

TT(FT)

PT(PSI)

REL LENGTH(FT)

REL LENGTH(FT)

REL LENGTH(FT)

REL LENGTH(FT)

REL LENGTH(FT)

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

ORB ALTITUDE
0 - 0° 8 - 0°

CHAN	T/C	FW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	FW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.376	0.1106	0.1106	0.1106	0.1106	39	42	0.366	0.0299	0.0299	0.0355	0.0392
2	2	0.373	0.0463	0.0463	0.0463	0.0463	40	43	0.368	0.0297	0.0297	0.0353	0.0389
3	3	0.372	0.0305	0.0305	0.0305	0.0305	41	44	0.367	0.0296	0.0296	0.0352	0.0388
4	4	0.373	0.0230	0.0230	0.0230	0.0230	42	45	0.371	0.0296	0.0296	0.0352	0.0388
5	5	0.373	0.0173	0.0173	0.0173	0.0173	43	46	0.371	0.0296	0.0296	0.0352	0.0388
6	6	0.372	0.0135	0.0135	0.0135	0.0135	44	47	0.355	0.0000	0.0000	0.0000	0.0000
7	7	0.372	0.0120	0.0120	0.0120	0.0120	45	48	0.367	0.02364	0.02364	0.02368	0.03099
8	8	0.371	0.0106	0.0106	0.0106	0.0106	46	50	0.369	0.0213	0.0213	0.0213	0.02904
9	9	0.370	0.0083	0.0083	0.0083	0.0083	47	51	0.369	0.0449	0.0449	0.0533	0.0539
10	10	0.369	0.0069	0.0069	0.0069	0.0069	48	53	0.369	0.0182	0.0182	0.0216	0.0239
11	11	0.368	0.0059	0.0059	0.0059	0.0059	49	55	0.369	0.0130	0.0130	0.0154	0.0171
12	12	0.368	0.0052	0.0052	0.0052	0.0052	50	57	0.369	0.0102	0.0102	0.0122	0.0134
13	13	0.368	0.0046	0.0046	0.0046	0.0046	51	59	0.368	0.0061	0.0061	0.0072	0.0080
14	14	0.367	0.0042	0.0042	0.0042	0.0042	52	60	0.371	0.0439	0.0439	0.0522	0.0577
15	15	0.367	0.0038	0.0038	0.0038	0.0038	53	61	0.370	0.0316	0.0316	0.0376	0.0415
16	16	0.367	0.0037	0.0037	0.0037	0.0037	54	65	0.370	0.0163	0.0163	0.0194	0.0214
17	17	0.367	0.0030	0.0030	0.0030	0.0030	55	68	0.370	0.0075	0.0075	0.0099	0.0109
18	18	0.367	0.0022	0.0022	0.0022	0.0022	56	69	0.372	0.0490	0.0490	0.0582	0.0643
19	19	0.369	0.0138	0.0138	0.0138	0.0138	57	70	0.372	0.0324	0.0324	0.0386	0.0426
20	20	0.368	0.0111	0.0111	0.0111	0.0111	58	72	0.372	0.0167	0.0167	0.0198	0.0219
21	21	0.367	0.0084	0.0084	0.0084	0.0084	59	73	0.367	0.0288	0.0288	0.0342	0.0378
22	22	0.367	0.0075	0.0075	0.0075	0.0075	60	74	0.367	0.0105	0.0105	0.0125	0.0138
23	23	0.367	0.0070	0.0070	0.0070	0.0070	61	75	0.367	0.0033	0.0033	0.0039	0.0043
24	24	0.368	0.0056	0.0056	0.0056	0.0056	62	76	0.367	0.0031	0.0031	0.0036	0.0040
25	25	0.368	0.0047	0.0047	0.0047	0.0047	63	77	0.370	0.0406	0.0406	0.0433	0.0453
26	26	0.367	0.0045	0.0045	0.0045	0.0045	64	78	0.370	0.0150	0.0150	0.0178	0.0196
27	27	0.368	0.0041	0.0041	0.0041	0.0041	65	79	0.369	0.0123	0.0123	0.0146	0.0161
28	28	0.367	0.0037	0.0037	0.0037	0.0037	66	80	0.369	0.0106	0.0106	0.0125	0.0138
29	29	0.367	0.0034	0.0034	0.0034	0.0034	67	81	0.373	0.0843	0.0843	0.1033	0.1108
30	30	0.368	0.0033	0.0033	0.0033	0.0033	68	82	0.372	0.0308	0.0308	0.0366	0.0405
31	31	0.367	0.0034	0.0034	0.0034	0.0034	69	83	0.372	0.0234	0.0234	0.0278	0.0300
32	32	0.367	0.0034	0.0034	0.0034	0.0034	70	84	0.372	0.0178	0.0178	0.0211	0.0234
33	33	0.366	0.0035	0.0035	0.0035	0.0035	71	85	0.371	0.0426	0.0426	0.0507	0.0560
34	34	0.367	0.0030	0.0030	0.0030	0.0030	72	86	0.373	0.0292	0.0292	0.0347	0.0383
35	35	0.366	0.0034	0.0034	0.0034	0.0034	73	87	0.374	0.0144	0.0144	0.0171	0.0189
36	36	0.367	0.0034	0.0034	0.0034	0.0034	74	88	0.378	0.0527	0.0527	0.0628	0.0695
37	37	0.369	0.0038	0.0038	0.0038	0.0038	75	89	0.381	0.0291	0.0291	0.0347	0.0384
38	38	0.369	0.0036	0.0036	0.0036	0.0036							

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
PLA NO. 34

MACH 5.22 3.4525E 06 6.7876E 05 6.80 816.6 0.84082E 06 0.0018 0.0060

RE/METER REL LENGTH(METER) PT(ATM) TT(DEC K) HT(JOULE/KG) RS(METER) RS(FT)

5.22 1.0523E 06 6.7876E 05 6.80 816.6 0.84082E 06 0.0018 0.0060

CHAN T/C T(DEC K) T(DEC R) Q(W/CM2) Q(FT/FT2-SEC) Q(FT/FT2-SEC) ST(0.850) ST(0.900) TIME(SEC)

1 1 312.7 562.9 8.070 7.111 72.990 64.314 5.7927E-03 6.4008E-03 0.430

2 2 312.3 562.1 3.379 2.977 72.062 64.377 2.4228E-03 2.6768E-03 0.405

3 3 312.3 562.2 2.225 1.960 73.048 64.365 1.5953E-03 1.7626E-03 0.409

4 4 312.3 562.1 1.679 1.480 73.056 64.372 1.2041E-03 1.3303E-03 0.412

5 5 312.2 561.9 1.262 1.112 73.076 64.390 9.0443E-04 9.5921E-04 0.391

6 6 311.5 560.8 0.990 0.872 73.164 64.467 7.0800E-04 7.8256E-04 0.416

7 7 311.0 559.9 0.879 0.774 73.238 64.533 6.2832E-04 6.5398E-04 0.416

8 8 310.3 558.5 0.776 0.683 73.351 64.632 5.5361E-04 6.1135E-04 0.387

9 9 309.4 556.9 0.610 0.537 73.474 64.740 4.3431E-04 4.7951E-04 0.380

10 10 308.9 556.1 0.504 0.444 73.543 64.802 3.5895E-04 3.5627E-04 0.369

11 11 308.3 554.9 0.437 0.385 73.639 64.886 3.1076E-04 3.4302E-04 0.337

12 12 308.0 554.4 0.386 0.340 73.675 64.918 2.7388E-04 3.0228E-04 0.332

13 13 307.8 554.0 0.336 0.296 73.713 64.951 2.3819E-04 2.6288E-04 0.262

14 14 307.0 552.5 0.364 0.321 73.827 65.052 2.5777E-04 2.8443E-04 0.309

15 15 307.0 552.6 0.358 0.315 73.826 65.051 2.5332E-04 2.7953E-04 0.409

16 16 307.9 554.3 1.744 1.536 73.650 64.930 1.2379E-03 1.3663E-03 0.260

17 17 308.3 555.0 1.766 1.556 73.622 64.879 1.2547E-03 1.3849E-03 0.297

18 18 308.7 555.7 1.637 1.442 73.574 64.828 1.1641E-03 1.2850E-03 0.318

19 19 309.3 556.7 1.011 0.891 73.494 64.758 7.2016E-04 7.5509E-04 0.282

20 20 307.8 554.0 0.815 0.718 73.710 64.948 5.7830E-04 6.3824E-04 0.290

21 21 307.4 553.4 0.618 0.545 73.757 64.990 4.3850E-04 4.8352E-04 0.373

22 22 307.6 553.6 1.440 1.269 73.741 64.976 1.0215E-03 1.1273E-03 0.371

23 23 308.8 609.9 0.000 0.000 0.000 0.000 0.0000 0.0000 0.480

24 24 308.0 554.4 0.411 0.362 73.678 64.920 2.9156E-04 3.2179E-04 0.480

25 25 308.2 554.8 1.378 1.214 73.645 64.891 9.7892E-04 1.0805E-03 0.310

26 26 307.5 553.4 0.628 0.554 73.755 64.989 4.5556E-04 4.5171E-04 0.445

27 27 307.7 553.9 0.747 0.658 73.719 64.956 5.2989E-04 5.8481E-04 0.358

28 28 307.9 554.3 1.282 1.130 73.685 64.927 9.1023E-04 1.0046E-03 0.307

29 29 307.5 553.5 0.892 0.786 73.751 64.984 6.3289E-04 6.5845E-04 0.463

30 30 308.0 554.4 0.831 0.732 73.681 64.923 5.9013E-04 6.5133E-04 0.359

31 31 307.5 553.5 0.989 0.872 73.747 64.981 7.0165E-04 7.7433E-04 0.276

32 32 307.1 552.8 0.914 0.805 73.825 65.032 6.4747E-04 7.1447E-04 0.526

33 33 306.5 551.7 1.290 1.137 73.854 65.111 9.1306E-04 1.0074E-03 0.209

34 34 307.0 552.6 0.000 0.000 0.000 0.000 0.0000 0.0000 0.266

35 35 306.5 551.7 0.845 0.745 73.853 65.109 5.9835E-04 6.6018E-04 0.434

36 36 307.3 555.1 1.592 1.403 73.785 65.015 1.1265E-03 1.2544E-03 0.487

37 37 308.6 555.4 3.957 3.487 73.597 64.849 2.8135E-03 3.1057E-03 0.370

38 38 308.6 555.5 2.113 2.390 73.553 64.885 1.9231E-03 2.1294E-03 0.256

39 39 306.8 552.2 2.209 1.947 73.856 65.077 1.5647E-03 1.7265E-03 0.382

40 40 308.0 556.3 2.188 1.928 73.684 64.925 1.5538E-03 1.7150E-03 0.316

41 41 307.0 552.6 2.187 1.927 73.824 65.049 1.5497E-03 1.7101E-03 0.381

42	559.1	1.837	4.262	73.258	64.586	3.4554E-03	0.816E-03	0.403
43	559.2	2.941	2.592	73.255	64.583	3.4554E-03	2.3207E-03	0.363
44	559.3	0.000	0.000	73.250	64.580	0.0000	0.0000	0.435
45	559.4	17.434	15.362	73.745	64.979	1.2368E-02	1.3649E-02	0.267
46	559.5	4.506	3.970	73.511	64.774	3.2078E-03	3.5415E-03	0.223
47	559.6	4.300	2.908	73.532	64.792	2.3488E-03	2.5930E-03	0.296
48	559.7	1.339	1.180	73.494	64.758	9.5337E-04	1.0528E-03	0.294
49	559.8	0.956	0.842	73.547	64.805	6.8033E-04	7.5104E-04	0.273
50	559.9	0.753	0.663	73.551	64.843	5.3535E-04	5.9096E-04	0.273
51	560.0	0.447	0.394	73.657	64.902	3.1757E-04	3.5052E-04	0.183
52	560.1	3.224	2.841	73.358	64.639	2.3009E-03	2.5408E-03	0.269
53	560.2	2.321	2.045	73.377	64.655	1.6562E-03	1.8289E-03	0.313
54	560.3	1.196	1.054	73.415	64.692	8.5300E-04	9.4186E-04	0.219
55	560.4	0.551	0.486	73.436	64.707	3.9293E-04	4.3385E-04	0.166
56	560.5	3.583	3.157	73.186	64.487	2.5640E-03	2.8322E-03	0.335
57	560.6	2.375	2.093	73.195	64.498	1.6594E-03	1.8711E-03	0.286
58	560.7	1.221	1.076	73.206	64.505	8.7370E-04	9.6505E-04	0.263
59	560.8	2.126	1.873	73.719	65.009	1.5073E-03	1.6633E-03	0.342
60	560.9	0.778	0.686	73.758	65.026	5.5170E-04	6.0880E-04	0.294
61	561.0	0.242	0.213	73.844	65.066	1.7135E-04	1.8908E-04	0.266
62	561.1	0.227	0.200	73.802	65.030	1.6065E-04	1.7727E-04	0.271
63	561.2	2.983	2.628	73.418	64.691	2.1269E-03	2.3485E-03	0.383
64	561.3	1.100	0.969	73.464	64.732	7.8369E-04	8.6526E-04	0.276
65	561.4	0.901	0.794	73.514	64.776	6.4132E-04	7.0802E-04	0.276
66	561.5	0.776	0.684	73.514	64.776	5.5243E-04	6.0988E-04	0.277
67	561.6	6.160	5.528	73.078	64.392	4.4158E-03	4.8785E-03	0.439
68	561.7	2.255	1.987	73.185	64.486	1.6137E-03	1.7825E-03	0.339
69	561.8	1.710	1.505	73.188	64.489	1.2234E-03	1.3514E-03	0.296
70	561.9	1.301	1.146	73.202	64.501	9.3088E-04	1.0282E-03	0.290
71	562.0	3.125	2.753	73.267	64.559	2.2333E-03	2.4666E-03	0.379
72	562.1	2.132	1.879	73.053	64.405	1.5280E-03	1.6880E-03	0.274
73	562.2	1.048	0.924	72.882	64.219	7.5362E-04	8.3286E-04	0.281
74	562.3	3.820	3.366	72.442	63.831	2.7655E-03	3.0585E-03	0.454
75	562.4	2.098	1.848	72.111	63.540	1.5266E-03	1.6893E-03	0.341

FREE-STREAM DENSITY VELOCITY PRODUCT = 2.0045E-01 (SLUGS/FT²-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

42	45	314.2	565.6	9.083	8.003	69.532	61.267	6.8375E-03	7.5703E-03	0.432
43	46	314.4	566.0	7.750	6.829	69.498	61.237	5.8377E-03	6.4637E-03	0.337
44	47	299.5	539.1	0.000	0.000	0.000	0.000	0.0000	0.0000	0.482
45	48	309.6	557.3	2.024	1.784	70.188	61.845	1.5075E-03	1.6671E-03	0.293
46	50	312.1	561.7	8.868	7.814	69.836	61.535	6.6423E-03	7.3502E-03	0.161
47	51	312.0	561.5	8.018	7.065	69.953	61.550	6.0042E-03	6.6440E-03	0.227
48	53	312.2	561.9	4.220	3.719	69.825	61.525	3.1618E-03	3.4989E-03	0.279
49	55	311.6	560.9	3.154	2.779	69.903	61.594	2.3597E-03	2.6108E-03	0.239
50	57	311.2	560.2	2.641	2.327	69.961	61.645	1.9740E-03	2.1839E-03	0.218
51	59	310.6	559.1	1.887	1.663	70.045	61.719	1.4090E-03	1.5586E-03	0.168
52	60	312.9	563.2	9.623	8.479	69.720	61.433	7.2218E-03	7.9932E-03	0.182
53	61	312.8	563.1	8.041	7.085	69.730	61.441	6.0338E-03	6.6781E-03	0.277
54	65	312.5	562.5	5.497	4.844	69.773	61.479	4.1218E-03	4.5616E-03	0.254
55	68	312.4	562.3	3.019	2.760	69.789	61.494	2.2632E-03	2.5046E-03	0.189
56	69	314.3	565.7	10.351	9.121	69.520	61.256	7.7938E-03	8.6293E-03	0.347
57	70	314.2	565.6	6.471	5.702	69.531	61.266	4.8715E-03	5.3935E-03	0.280
58	72	314.2	565.5	4.063	3.580	69.540	61.274	3.0579E-03	3.3856E-03	0.259
59	73	309.1	556.8	0.101	0.039	70.230	61.882	7.4941E-05	8.2871E-05	0.024
60	74	309.1	556.4	0.132	0.116	70.257	61.906	9.7852E-05	1.0820E-04	0.149
61	75	308.8	555.8	0.189	0.167	70.310	61.953	1.4078E-04	1.5565E-04	0.203
62	76	309.2	556.6	0.309	0.272	70.245	61.895	2.2961E-04	2.5391E-04	0.236
63	77	311.9	561.5	1.000	0.881	69.858	61.555	7.4904E-04	8.2884E-04	0.439
64	78	311.7	561.0	0.214	0.188	69.895	61.587	1.5983E-04	1.7684E-04	0.195
65	79	311.4	560.5	0.387	0.341	69.938	61.625	2.8967E-04	3.2048E-04	0.317
66	80	311.6	561.0	0.370	0.326	69.899	61.590	2.7650E-04	3.0594E-04	0.281
67	81	314.4	566.0	3.644	3.211	69.498	61.237	2.7450E-03	3.0394E-03	0.576
68	82	313.8	564.8	0.924	0.814	69.590	61.319	6.9511E-04	7.6953E-04	0.397
69	83	313.8	564.9	0.444	0.391	69.583	61.312	3.3378E-04	3.6952E-04	0.320
70	84	313.9	565.0	0.373	0.329	69.577	61.306	2.8079E-04	3.1086E-04	0.266
71	85	313.1	563.6	0.739	0.651	69.689	61.405	5.5476E-04	6.1404E-04	0.427
72	86	314.7	566.5	0.621	0.547	69.458	61.202	4.6798E-04	5.1821E-04	0.393
73	87	316.1	569.0	0.752	0.663	69.264	61.031	5.6891E-04	6.3018E-04	0.425
74	88	319.6	575.3	1.062	0.936	68.761	60.588	8.1019E-04	8.9821E-04	0.324
75	89	322.0	579.5	1.045	0.921	68.424	60.291	8.0174E-04	8.8945E-04	0.263

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9901E-01 (SLUGS/FT²-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 36

ORR ALONE
 $\alpha = 60^\circ, \beta = 0^\circ$

MACH 5.22
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REPRODUCIBILITY OF THE
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42	310.1	500.9	10.879	9.540	76.653	67.577	1.8305E-03	5.4218E-03	0.443
43	316.8	570.2	11.441	10.081	76.594	67.490	8.9435E-03	8.8715E-03	0.323
44	301.4	542.5	0.000	0.000	0.000	0.000	0.0000	0.0000	1.049
45	311.6	560.8	3.029	2.669	77.343	68.150	2.1055E-03	2.3201E-03	0.046
46	314.7	566.4	10.149	8.942	76.856	67.755	7.1028E-03	7.8303E-03	0.124
47	314.5	560.0	9.621	8.477	76.925	67.781	6.7304E-03	7.4195E-03	0.189
48	314.6	566.3	6.959	6.131	76.902	67.761	4.8657E-03	5.3684E-03	0.214
49	314.2	562.0	6.171	5.437	76.962	67.814	4.3147E-03	4.7562E-03	0.198
50	314.2	565.5	5.690	5.014	76.961	67.813	3.9784E-03	4.2855E-03	0.187
51	314.1	565.3	4.637	4.086	76.982	67.832	3.2415E-03	3.5731E-03	0.161
52	314.6	566.4	8.629	7.003	76.900	67.759	6.0388E-03	6.6574E-03	0.098
53	314.6	566.3	8.656	7.620	76.901	67.760	6.0519E-03	6.6718E-03	0.199
54	314.5	566.9	6.391	5.631	76.855	67.719	4.4755E-03	4.9342E-03	0.170
55	315.1	567.8	4.393	3.871	76.784	67.657	3.0796E-03	3.3956E-03	0.092
56	315.8	563.5	10.855	9.565	76.726	67.606	7.6165E-03	8.3989E-03	0.190
57	316.1	569.0	8.618	7.594	76.690	67.574	6.0500E-03	6.6718E-03	0.186
58	316.6	569.5	6.292	5.544	76.616	67.509	4.4221E-03	4.8772E-03	0.158
59	317.2	561.4	0.051	0.245	77.257	68.109	3.5282E-05	3.8872E-05	0.645
60	317.7	561.0	0.205	0.179	77.329	68.137	1.4103E-04	1.5537E-04	0.196
61	311.3	560.3	0.352	0.311	77.388	68.189	2.4491E-04	2.6980E-04	0.292
62	311.9	561.4	0.439	0.387	77.297	68.109	3.0560E-04	3.3670E-04	0.293
63	313.8	564.9	0.246	0.217	77.018	67.863	1.7175E-04	1.8931E-04	0.414
64	313.6	564.2	0.161	0.142	77.047	67.889	1.1239E-04	1.2387E-04	0.284
65	313.4	564.2	0.234	0.204	77.073	67.911	2.3316E-04	2.5698E-04	0.246
66	314.2	565.5	0.267	0.235	76.965	67.820	1.8677E-04	2.0588E-04	0.228
67	316.0	568.7	2.754	2.427	76.708	67.590	1.9330E-03	2.1316E-03	0.548
68	315.5	568.1	0.502	0.443	76.758	67.635	3.5234E-04	3.8522E-04	0.456
69	314.8	568.4	0.229	0.202	76.732	67.611	1.6066E-04	1.7716E-04	0.234
70	316.2	569.2	0.321	0.283	76.673	67.559	2.2566E-04	2.4886E-04	0.372
71	313.5	565.1	0.345	0.308	77.002	67.849	2.4422E-04	2.6920E-04	0.324
72	314.7	566.5	0.531	0.468	76.990	67.750	3.7200E-04	4.1011E-04	0.114
73	316.4	569.5	0.971	0.855	76.642	67.532	6.8192E-04	7.5266E-04	0.428
74	319.1	574.4	0.701	0.618	76.255	67.191	4.9547E-04	5.4676E-04	0.253
75	321.2	578.2	1.065	0.939	75.949	66.922	7.5627E-04	8.3455E-04	0.255

WAVE-STREAM DENSITY-VELOCITY PRODUCT = 1.9363E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH		RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195				
5.22		3.2573E 06	6.4233E 05	0.197	6.84	848.0	-0.87530E 05	0.0018	RUN NO. 37				
MACH		RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET ALONE				
5.22		9.9586E 05	6.4233E 05	0.645	100.48	1526.3	376.40	0.0060	$\alpha = -50^\circ, \beta = 0^\circ$				
CHAN	T/C	FW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HM/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.373	0.0781	0.0781	0.0929	0.1027	39	51	0.374	0.0247	0.0247	0.0294	0.0325
2	2	0.373	0.1177	0.1177	0.1401	0.1548	40	54	0.365	0.1632	0.1632	0.1937	0.2137
3	3	0.373	0.1432	0.1432	0.1704	0.1883	41	55	0.364	0.1604	0.1604	0.1903	0.2099
4	4	0.373	0.1579	0.1579	0.1879	0.2076	42	56	0.370	0.1551	0.1551	0.1844	0.2036
5	5	0.373	0.1583	0.1583	0.1884	0.2081	43	57	0.373	0.1048	0.1048	0.1247	0.1378
6	6	0.373	0.1672	0.1672	0.1989	0.2198	44	58	0.373	0.0571	0.0571	0.0679	0.0750
7	7	0.374	0.1739	0.1739	0.2069	0.2286	45	60	0.365	0.1639	0.1639	0.1945	0.2145
8	8	0.373	0.1702	0.1702	0.2025	0.2237	46	61	0.366	0.1628	0.1628	0.1933	0.2133
9	9	0.372	0.1551	0.1551	0.1845	0.2038	47	62	0.371	0.1545	0.1545	0.1837	0.2029
10	10	0.371	0.1579	0.1579	0.1878	0.2074	48	63	0.373	0.1078	0.1078	0.1282	0.1417
11	11	0.369	0.1686	0.1686	0.2005	0.2211	49	64	0.374	0.0567	0.0567	0.0575	0.0746
12	12	0.367	0.1727	0.1727	0.2051	0.2264	50	65	0.373	0.0233	0.0233	0.0278	0.0307
13	13	0.371	0.0222	0.0222	0.0264	0.0291	51	66	0.370	0.0070	0.0070	0.0084	0.0092
14	14	0.365	0.1722	0.1722	0.2044	0.2255	52	67	0.367	0.0039	0.0039	0.0046	0.0051
15	15	0.365	0.1641	0.1641	0.1947	0.2148	53	68	0.359	0.0059	0.0059	0.0070	0.0077
16	16	0.373	0.1073	0.1073	0.1277	0.1411	54	70	0.365	0.1658	0.1658	0.1968	0.2171
17	17	0.374	0.0571	0.0571	0.0680	0.0751	55	71	0.371	0.1457	0.1457	0.1732	0.1913
18	18	0.373	0.0228	0.0228	0.0272	0.0300	56	72	0.373	0.1040	0.1040	0.1237	0.1367
19	19	0.365	0.1706	0.1706	0.2025	0.2233	57	73	0.373	0.0527	0.0527	0.0627	0.0693
20	20	0.373	0.1053	0.1053	0.1252	0.1384	58	77	0.366	0.1634	0.1634	0.1940	0.2140
21	21	0.364	0.1681	0.1681	0.1995	0.2201	59	78	0.371	0.1481	0.1481	0.1761	0.1945
22	22	0.370	0.1500	0.1500	0.1783	0.1969	60	79	0.373	0.1034	0.1034	0.1230	0.1359
23	23	0.373	0.1081	0.1081	0.1286	0.1421	61	81	0.373	0.0219	0.0219	0.0260	0.0287
24	24	0.374	0.0613	0.0613	0.0729	0.0806	62	84	0.367	0.1637	0.1637	0.1944	0.2145
25	25	0.373	0.0264	0.0264	0.0315	0.0348	63	85	0.371	0.1500	0.1500	0.1783	0.1970
26	26	0.371	0.0062	0.0062	0.0074	0.0082	64	86	0.373	0.1046	0.1046	0.1244	0.1374
27	27	0.367	0.0023	0.0023	0.0028	0.0030	65	90	0.366	0.1661	0.1661	0.1972	0.2176
28	28	0.359	0.0037	0.0037	0.0044	0.0049	66	91	0.371	0.1506	0.1506	0.1791	0.1978
29	29	0.365	0.1614	0.1614	0.1915	0.2113	67	92	0.373	0.1026	0.1026	0.1220	0.1348
30	30	0.365	0.1602	0.1602	0.1901	0.2097	68	94	0.372	0.0215	0.0215	0.0256	0.0283
31	31	0.371	0.1540	0.1540	0.1831	0.2022	69	98	0.366	0.1767	0.1767	0.2098	0.2314
32	32	0.374	0.1035	0.1035	0.1232	0.1361	70	99	0.372	0.1557	0.1557	0.1851	0.2045
33	33	0.374	0.0585	0.0585	0.0696	0.0769	71	100	0.374	0.1059	0.1059	0.1260	0.1392
34	34	0.389	0.0000	0.0000	0.0000	0.0000	72	103	0.367	0.1716	0.1716	0.2037	0.2248
35	35	0.366	0.1677	0.1677	0.1991	0.2197	73	104	0.372	0.1559	0.1559	0.1854	0.2048
36	36	0.371	0.1578	0.1578	0.1876	0.2072	74	105	0.374	0.1047	0.1047	0.1246	0.1377
37	37	0.373	0.1084	0.1084	0.1290	0.1425	75	107	0.374	0.0247	0.0247	0.0294	0.0324
38	38	0.374	0.0617	0.0617	0.0734	0.0811	76						

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER

MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 37

WACH	RE/METER	REL	TH(DEC K)	TH(DEC R)	C(W/CM2)	Q(BTU/FT2-SEC)	Q(SW/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.853)	TIME(SEC)
5.22	3.2673E 06	6.4233E 05	0.197	PT(PSI)	PT(ATM)	TT(DEC K)	HT(JOULE/KG)	RS(METER)	0.0018	0.0018	0.37
5.22	9.9586E 05	6.4233E 05	0.645	REL	REL	TT(DEC R)	HT(JOULE/LB)	RS(FT)	0.0060	0.0060	0.37
1	325.2	585.3	5.963	5.254	7.922	76.334	67.261	4.1836E-03	4.6222E-03	0.532	0.340
2	325.0	585.9	8.991	7.922	7.922	76.364	67.287	6.3054E-03	6.966E-03	0.384	0.447
3	325.5	585.9	10.927	9.628	9.628	76.287	67.219	7.6720E-03	8.4770E-03	0.447	0.453
4	325.5	585.9	12.046	10.614	10.614	76.286	67.219	8.4580E-03	9.3455E-03	0.447	0.463
5	325.2	585.4	12.084	10.647	10.647	76.324	67.221	8.4756E-03	9.3688E-03	0.452	0.454
6	325.5	585.9	12.754	11.238	11.238	76.289	67.213	9.3138E-03	1.0291E-02	0.454	0.469
7	325.5	586.0	13.264	11.687	11.687	76.281	67.213	9.3138E-03	1.0291E-02	0.454	0.438
8	324.9	584.9	12.997	11.452	11.452	76.370	67.292	8.3047E-03	9.1733E-03	0.438	0.430
9	324.1	583.5	11.863	10.453	10.453	76.483	67.392	8.4547E-03	9.3371E-03	0.430	0.392
10	323.3	581.9	12.100	10.662	10.662	76.610	67.504	9.0192E-03	9.9572E-03	0.429	0.409
11	321.8	579.3	12.949	11.409	11.409	76.823	67.691	9.2659E-03	1.0193E-02	0.409	0.408
12	320.0	576.1	13.311	11.729	11.729	77.081	67.919	1.1870E-03	1.3110E-03	0.408	0.437
13	323.5	582.3	1.698	1.496	1.496	76.577	67.475	9.2068E-03	1.0156E-02	0.437	0.426
14	318.2	572.7	13.323	11.739	11.739	77.355	68.160	8.7698E-03	9.6737E-03	0.417	0.426
15	318.0	572.4	12.694	11.185	11.185	77.378	68.180	8.7698E-03	9.6737E-03	0.417	0.450
16	324.9	584.9	8.198	7.224	7.224	76.370	67.292	5.7489E-03	6.3513E-03	0.426	0.395
17	325.7	586.3	4.358	3.850	3.850	76.252	67.189	3.0611E-03	3.3825E-03	0.426	0.426
18	324.7	584.5	1.745	1.537	1.537	76.397	67.316	1.2230E-03	1.3511E-03	0.426	0.426
19	318.2	572.8	13.193	11.625	11.625	77.348	68.154	9.1181E-03	1.0058E-02	0.426	0.426
20	325.1	585.1	8.036	7.081	7.081	76.348	67.273	5.6373E-03	6.2282E-03	0.426	0.426
21	317.6	571.6	13.020	11.473	11.473	77.439	68.234	8.9869E-03	9.9123E-03	0.417	0.426
22	322.6	580.7	11.505	10.138	10.138	76.710	67.592	8.0274E-03	8.8638E-03	0.417	0.426
23	325.1	585.1	8.254	7.273	7.273	76.349	67.274	5.7897E-03	6.3966E-03	0.426	0.426
24	325.9	586.7	4.669	4.114	4.114	76.223	67.162	3.2814E-03	3.6260E-03	0.426	0.426
25	325.1	585.2	2.019	1.779	1.779	76.339	67.265	1.4162E-03	1.5647E-03	0.426	0.426
26	323.0	581.3	0.477	0.421	0.421	76.655	67.544	3.3326E-04	3.6801E-04	0.426	0.426
27	319.9	575.9	0.179	0.158	0.158	77.096	67.932	1.2431E-04	1.3718E-04	0.426	0.426
28	312.1	561.7	0.293	0.258	0.258	78.241	68.941	1.9965E-04	2.1994E-04	0.426	0.426
29	317.8	572.1	12.490	11.006	11.006	77.400	68.200	8.6260E-03	9.5147E-03	0.374	0.383
30	318.2	572.8	12.386	10.916	10.916	77.345	68.151	8.5625E-03	9.4455E-03	0.383	0.406
31	323.0	581.4	11.802	10.399	10.399	76.650	67.539	8.2416E-03	9.1013E-03	0.406	0.412
32	325.5	585.9	7.899	6.960	6.960	76.282	67.215	5.5644E-03	6.1285E-03	0.412	0.437
33	326.3	587.3	4.454	3.925	3.925	76.177	67.122	3.1324E-03	3.4617E-03	0.437	0.437
34	338.8	609.9	0.000	0.000	0.000	74.349	65.512	8.9675E-03	9.8930E-03	0.379	0.379
35	338.6	573.4	12.964	11.423	11.423	77.294	68.106	8.456E-03	9.3265E-03	0.402	0.418
36	323.0	581.4	12.094	10.556	10.556	76.648	67.538	5.8063E-03	6.4154E-03	0.418	0.433
37	325.4	585.7	8.271	7.258	7.258	76.298	67.229	3.3030E-03	3.6512E-03	0.433	0.441
38	325.5	587.1	4.639	4.144	4.144	76.192	67.135	1.3255E-03	1.4646E-03	0.441	0.437
39	325.5	585.9	1.888	1.663	1.663	76.283	67.216	8.7233E-03	9.6230E-03	0.379	0.379
40	318.3	573.6	12.618	11.119	11.119	77.332	68.140	9.4532E-03	0.4532E-03	0.379	0.379
41	317.6	571.7	12.417	10.941	10.941	77.438	68.233	8.5707E-03	0.4532E-03	0.379	0.379

42	56	322.6	580.7	11.997	10.483	76.709	67.591	8.3009E-03	9.1658E-03	0.476
43	57	325.2	585.3	8.001	7.050	76.337	67.263	5.6137E-03	6.2023E-03	0.417
44	58	325.5	585.8	4.353	3.835	76.293	67.224	3.0560E-03	3.3766E-03	0.425
45	59	318.0	572.3	12.682	11.175	77.384	68.186	8.7607E-03	9.6636E-03	0.377
46	60	318.6	573.6	12.585	11.090	77.283	68.097	8.7067E-03	9.6055E-03	0.377
47	61	321.1	581.5	11.843	10.436	76.650	67.531	8.2716E-03	9.1345E-03	0.407
48	62	325.4	585.7	8.223	7.245	76.305	67.235	5.7718E-03	6.3773E-03	0.419
49	63	325.9	586.6	4.325	3.811	76.229	67.168	3.0395E-03	3.3587E-03	0.426
50	64	324.9	584.8	1.782	1.571	76.376	67.297	1.2498E-03	1.3808E-03	0.441
51	65	322.8	581.0	0.540	0.476	76.681	67.567	3.7670E-04	4.1597E-04	0.446
52	66	319.9	575.7	0.300	0.254	77.107	67.942	2.0810E-04	2.2965E-04	0.381
53	67	312.8	562.1	0.463	0.408	78.130	68.843	3.1666E-04	3.4891E-04	0.320
54	68	318.2	572.7	12.825	11.301	77.349	68.155	8.8540E-03	9.7780E-03	0.362
55	69	322.9	581.3	11.170	9.842	76.659	67.547	7.7992E-03	8.6125E-03	0.387
56	70	325.9	584.8	1.942	6.998	76.374	67.296	5.5688E-03	6.1523E-03	0.404
57	71	325.4	585.8	4.023	3.544	76.257	67.228	2.8239E-03	3.1202E-03	0.413
58	72	317.0	574.1	12.621	11.121	77.239	68.058	8.7372E-03	9.6397E-03	0.348
59	73	323.5	582.3	11.341	9.993	76.578	67.476	7.9284E-03	8.7563E-03	0.370
60	74	325.4	585.7	7.888	6.951	76.302	67.232	5.5373E-03	6.1182E-03	0.396
61	75	324.7	584.4	1.670	1.472	76.407	67.325	1.1705E-03	1.2931E-03	0.422
62	76	319.6	575.3	12.627	11.126	77.143	67.973	8.7532E-03	9.6589E-03	0.344
63	77	323.5	582.2	11.485	10.120	76.581	67.478	8.0286E-03	8.8670E-03	0.366
64	78	325.3	585.5	7.979	7.031	76.319	67.247	5.6000E-03	6.1872E-03	0.387
65	79	318.8	573.3	12.836	11.311	77.264	68.080	8.8828E-03	9.8200E-03	0.341
66	80	323.2	581.8	11.542	10.170	76.618	67.511	8.0638E-03	8.9053E-03	0.372
67	81	325.4	585.7	7.826	6.896	76.305	67.235	5.4934E-03	6.0697E-03	0.374
68	82	324.6	584.3	1.654	1.449	76.417	67.334	1.1524E-03	1.2730E-03	0.400
69	83	319.1	574.4	13.641	12.020	77.212	68.034	9.4467E-03	1.0423E-02	0.343
70	84	324.1	583.3	11.908	10.492	76.494	67.402	8.3349E-03	9.2065E-03	0.366
71	85	326.0	586.2	8.063	7.109	76.210	67.151	5.6709E-03	6.2665E-03	0.373
72	86	319.8	575.3	13.229	11.657	77.116	67.950	9.1747E-03	1.0124E-02	0.345
73	87	324.3	583.8	11.919	10.502	76.454	67.366	8.3476E-03	9.2211E-03	0.363
74	88	326.1	587.0	7.978	7.030	76.158	67.140	5.6093E-03	6.1987E-03	0.381
75	89	325.9	586.7	1.880	1.657	76.222	67.162	1.3216E-03	1.4604E-03	0.374

FEED-STREAM DENSITY-VELOCITY PRODUCT = 1.9682E-01 SLUGS/FT²-SEC

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ARES RESEARCH CENTER MOFFETT FIELD ALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 38

RE/METER 3.4107E 06 6.7052E 05 0.197 6.67 813.3 0.83722E 06 0.0018

RE/FT 1.0356E 06 6.7052E 05 0.645 98.02 1464.0 360.02 0.0060

ET ALONE
α = -120°, β = 0°

CHAN	T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	H/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.383	0.0251	0.0251	0.0299	0.0331	39	51	0.388	0.0196	0.0196	0.0234	0.0260
2	2	0.382	0.0333	0.0333	0.0398	0.0440	40	54	0.381	0.1242	0.1242	0.1482	0.1640
3	3	0.383	0.0413	0.0413	0.0493	0.0546	41	55	0.380	0.1225	0.1225	0.1460	0.1616
4	4	0.383	0.0553	0.0553	0.0588	0.0651	42	56	0.384	0.1180	0.1180	0.1409	0.1560
5	5	0.382	0.0542	0.0542	0.0623	0.0690	43	57	0.386	0.0799	0.0799	0.0955	0.1058
6	6	0.382	0.0603	0.0603	0.0719	0.0796	44	58	0.387	0.0446	0.0446	0.0532	0.0590
7	7	0.382	0.0681	0.0681	0.0813	0.0900	45	60	0.381	0.1249	0.1249	0.1489	0.1648
8	8	0.381	0.0734	0.0734	0.0876	0.0965	46	61	0.381	0.1250	0.1250	0.1491	0.1650
9	9	0.382	0.0794	0.0794	0.0900	0.0996	47	62	0.384	0.1177	0.1177	0.1406	0.1556
10	10	0.382	0.0855	0.0855	0.1020	0.1129	48	63	0.386	0.0827	0.0827	0.0988	0.1095
11	11	0.381	0.1038	0.1038	0.1238	0.1370	49	64	0.387	0.0447	0.0447	0.0534	0.0592
12	12	0.380	0.1220	0.1220	0.1455	0.1609	50	65	0.387	0.0182	0.0182	0.0218	0.0241
13	13	0.384	0.0158	0.0158	0.0188	0.0209	51	66	0.386	0.0050	0.0050	0.0059	0.0066
14	14	0.380	0.1289	0.1289	0.1537	0.1701	52	67	0.384	0.0034	0.0034	0.0040	0.0045
15	15	0.381	0.1239	0.1239	0.1477	0.1634	53	68	0.379	0.0039	0.0039	0.0046	0.0051
16	16	0.386	0.0825	0.0825	0.0985	0.1091	54	70	0.381	0.1324	0.1324	0.1579	0.1747
17	17	0.387	0.0458	0.0458	0.0547	0.0606	55	71	0.384	0.1159	0.1159	0.1384	0.1533
18	18	0.387	0.0187	0.0187	0.0223	0.0247	56	72	0.386	0.0825	0.0825	0.0985	0.1091
19	19	0.381	0.1293	0.1293	0.1542	0.1706	57	73	0.387	0.0433	0.0433	0.0518	0.0574
20	20	0.386	0.0812	0.0812	0.0970	0.1075	58	77	0.381	0.1361	0.1361	0.1623	0.1796
21	21	0.381	0.1282	0.1282	0.1529	0.1692	59	78	0.384	0.1229	0.1229	0.1467	0.1624
22	22	0.384	0.1144	0.1144	0.1366	0.1512	60	79	0.386	0.0852	0.0852	0.1018	0.1127
23	23	0.383	0.0837	0.0837	0.1000	0.1107	61	81	0.387	0.0183	0.0183	0.0219	0.0243
24	24	0.387	0.0491	0.0491	0.0587	0.0650	62	84	0.382	0.1388	0.1388	0.1655	0.1832
25	25	0.387	0.0215	0.0215	0.0257	0.0285	63	85	0.384	0.1263	0.1263	0.1508	0.1670
26	26	0.385	0.0052	0.0052	0.0062	0.0069	64	86	0.386	0.0870	0.0870	0.1039	0.1151
27	27	0.384	0.0023	0.0023	0.0027	0.0030	65	90	0.381	0.1435	0.1435	0.1712	0.1894
28	28	0.383	0.0039	0.0039	0.0046	0.0051	66	91	0.384	0.1292	0.1292	0.1531	0.1695
29	29	0.391	0.1241	0.1241	0.1480	0.1638	67	92	0.386	0.0854	0.0854	0.1020	0.1130
30	30	0.381	0.1227	0.1227	0.1463	0.1619	68	94	0.387	0.0183	0.0183	0.0219	0.0243
31	31	0.384	0.1172	0.1172	0.1399	0.1549	69	98	0.381	0.1532	0.1532	0.1827	0.2022
32	32	0.387	0.0800	0.0800	0.0956	0.1059	70	99	0.385	0.1323	0.1323	0.1580	0.1750
33	33	0.389	0.0463	0.0463	0.0554	0.0613	71	100	0.387	0.0879	0.0879	0.1050	0.1164
34	34	0.406	0.0000	0.0000	0.0000	0.0000	72	103	0.382	0.1540	0.1540	0.1837	0.2033
35	35	0.381	0.1275	0.1275	0.1520	0.1683	73	104	0.385	0.1392	0.1392	0.1662	0.1841
36	36	0.315	0.1197	0.1197	0.1429	0.1583	74	105	0.387	0.0961	0.0961	0.1148	0.1272
37	37	0.387	0.0828	0.0828	0.0959	0.1095	75	107	0.389	0.0383	0.0383	0.0457	0.0507
38	38	0.383	0.0485	0.0485	0.0580	0.0643							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH (METER)	PT (ATM)	TT (DEG K)	HT (FOOT/KG)	RS (METER)	TEST NO.
5.22	3.4107E 06	6.7052E 05	0.197	6.67	813.3	0.83722E 06	0.0018	195
MACH	RE/FT	REL	LENGTH (FT)	PT (PSI)	TT (DEG R)	HT (BTU/LBM)	RS (FT)	RUN NO.
5.22	1.0396E 06	6.7052E 05	0.645	98.02	1464.0	360.02	0.0060	38
CHAN	T/C	TIME (SEC)	TIME (SEC)	TIME (SEC)	TIME (SEC)	TIME (SEC)	TIME (SEC)	TIME (SEC)
1	1	319.0	574.2	1.777	1.565	70.914	62.485	1.3243E-03
2	2	318.7	573.7	2.365	2.083	70.951	62.518	1.7611E-03
3	3	319.0	574.2	2.929	2.581	70.910	62.482	2.1835E-03
4	4	318.9	574.0	3.496	3.081	70.926	62.496	2.6054E-03
5	5	318.7	573.6	3.707	3.266	70.957	62.522	2.8841E-03
6	6	318.8	573.8	4.276	3.767	70.940	62.508	3.0561E-03
7	7	318.8	573.9	4.834	4.259	70.934	62.502	3.5263E-03
8	8	318.6	573.6	5.207	4.588	70.961	62.526	3.9872E-03
9	9	318.5	573.3	5.352	4.716	70.985	62.547	4.4104E-03
10	10	318.2	572.8	6.072	5.351	71.019	62.577	5.0010E-03
11	11	317.7	571.9	7.378	6.501	71.055	62.644	5.8311E-03
12	12	316.9	571.4	8.687	7.654	71.210	62.746	6.4440E-03
13	13	320.0	575.9	1.117	0.984	70.771	62.359	8.3426E-04
14	14	317.2	570.9	9.175	8.084	71.172	62.712	6.8104E-03
15	15	317.4	571.3	8.811	7.764	71.145	62.688	6.5432E-03
16	16	321.7	579.5	5.816	5.125	70.530	62.146	4.3623E-03
17	17	322.6	580.7	3.223	2.840	70.391	62.024	2.4227E-03
18	18	322.3	580.2	1.314	1.158	70.433	62.061	9.8693E-04
19	19	317.6	571.7	9.193	8.101	71.108	62.656	6.8311E-03
20	20	321.9	579.5	5.724	5.044	70.489	62.110	4.2963E-03
21	21	317.3	571.1	9.125	8.041	71.161	62.702	6.7747E-03
22	22	320.3	576.5	8.091	7.129	70.731	62.323	6.0488E-03
23	23	322.0	579.6	5.897	5.196	70.482	62.104	4.4268E-03
24	24	322.9	581.2	3.453	3.043	70.356	61.993	2.5974E-03
25	25	322.8	581.1	1.515	1.335	70.361	61.998	1.1358E-03
26	26	321.9	579.5	0.367	0.323	70.492	62.113	2.7548E-04
27	27	320.3	576.5	0.161	0.142	70.728	62.321	1.2037E-04
28	28	315.1	567.2	0.276	0.243	71.470	62.975	2.0383E-04
29	29	317.4	571.4	8.830	7.780	71.135	62.679	6.5579E-03
30	30	317.7	571.8	8.721	7.684	71.100	62.648	6.4810E-03
31	31	320.5	576.9	8.283	7.298	70.694	62.291	6.1958E-03
32	32	322.4	580.2	5.633	4.963	70.431	62.059	4.2315E-03
33	33	323.1	581.6	3.257	2.870	70.325	61.566	2.4514E-03
34	34	339.8	609.9	0.000	0.000	68.077	59.985	0.0000
35	35	317.8	572.1	9.061	7.984	71.080	62.631	6.7356E-03
36	36	320.5	577.0	8.463	7.457	70.651	62.289	6.3308E-03
37	37	322.2	580.0	5.830	5.137	70.447	62.073	4.3787E-03
38	38	323.1	581.6	3.413	3.008	70.322	61.963	2.5688E-03
39	39	323.2	581.8	1.378	1.214	70.303	61.947	1.0374E-03
40	40	317.8	572.1	8.830	7.780	71.077	62.629	6.5639E-03
41	41	317.1	570.7	8.719	7.683	71.189	62.727	6.4702E-03

REPRODUCIBILITY OF THE
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42	56	320.0	579.0	8.350	7.357	70.767	62.355	6.2386E-03	6.9079E-03	0.509
43	57	321.9	579.4	5.636	4.966	70.486	62.116	4.2295E-03	4.6854E-03	0.447
44	58	322.5	580.5	3.138	2.765	70.411	62.042	2.3578E-03	2.6124E-03	0.465
45	59	317.2	571.0	8.888	7.832	71.164	62.705	6.5983E-03	7.3010E-03	0.410
46	60	317.6	571.7	8.891	7.834	71.109	62.656	6.6059E-03	7.3102E-03	0.413
47	61	320.1	576.1	8.332	7.341	70.759	62.349	6.2258E-03	6.9937E-03	0.437
48	62	321.9	579.4	5.832	5.139	70.455	62.116	4.3767E-03	4.8485E-03	0.450
49	63	322.7	580.8	3.147	2.773	70.386	62.020	2.3663E-03	2.6219E-03	0.465
50	64	322.6	580.7	1.284	1.131	70.391	62.024	9.6458E-04	1.0692E-03	0.472
51	65	321.8	579.2	0.351	0.09	70.511	62.129	2.6337E-04	2.9175E-04	0.393
52	66	320.2	576.3	0.239	0.21	70.741	62.332	1.7889E-04	1.9809E-04	0.436
53	67	313.6	568.1	0.276	0.243	71.359	62.912	2.0424E-04	2.2591E-04	0.318
54	68	317.3	571.2	9.420	8.300	71.147	62.690	6.9949E-03	7.7402E-03	0.406
55	69	320.2	576.3	8.202	7.227	70.746	62.336	6.1300E-03	6.7878E-03	0.429
56	70	321.6	578.9	5.817	5.126	70.539	62.155	4.3623E-03	4.8321E-03	0.440
57	71	322.5	580.5	3.050	2.688	70.411	62.041	2.2922E-03	2.5397E-03	0.465
58	72	317.7	571.8	9.675	8.525	71.102	62.650	7.1894E-03	7.9560E-03	0.402
59	73	320.5	576.9	8.685	7.653	70.657	62.294	6.4966E-03	7.1944E-03	0.418
60	74	321.9	579.5	6.004	5.291	70.489	62.111	4.5066E-03	4.9924E-03	0.440
61	75	322.6	580.6	1.289	1.136	70.400	62.032	9.6922E-04	1.0739E-03	0.479
62	76	318.0	572.4	8.859	8.687	71.051	62.606	7.3326E-03	8.1152E-03	0.401
63	77	320.4	576.7	6.934	7.872	70.714	62.309	6.6810E-03	7.3984E-03	0.419
64	78	321.7	579.1	6.136	5.407	70.518	62.136	4.6034E-03	5.0954E-03	0.435
65	79	317.5	571.5	10.209	8.996	71.121	62.667	7.5842E-03	8.3926E-03	0.402
66	80	320.4	576.7	9.065	7.988	70.710	62.305	6.7794E-03	7.5074E-03	0.431
67	81	322.2	579.9	6.017	5.302	70.458	62.083	4.5184E-03	5.0058E-03	0.429
68	82	322.7	580.6	1.290	1.137	70.372	62.010	9.7015E-04	1.0720E-03	0.465
69	83	317.9	572.2	10.887	9.593	71.070	62.622	8.0946E-03	8.9582E-03	0.406
70	84	320.9	577.6	9.345	8.234	70.643	62.246	6.9963E-03	7.7485E-03	0.427
71	85	322.4	580.4	5.191	5.455	70.419	62.049	4.5518E-03	5.1239E-03	0.430
72	86	318.4	573.1	10.931	9.632	70.999	62.560	8.1364E-03	9.0055E-03	0.410
73	87	321.2	578.2	9.824	8.656	70.592	62.201	7.3609E-03	8.1530E-03	0.417
74	88	322.6	580.7	6.745	5.961	70.353	62.026	5.0854E-03	5.6346E-03	0.427
75	89	323.9	582.9	2.686	2.367	70.216	61.870	2.0252E-03	2.2446E-03	0.402

STREAM DENSITY-VELOCITY PRODUCT = 1.9727E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AEROSPACE RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***															TEST NO. 105
MACH 5.30 RE/METER 1.557E 07 3.0624E 06 LENGTH(MET) 0.197															RUN NO. 39
MACH 5.30 RE/FT 4.7480E 06 3.0624E 06 LENGTH(FT) 0.645															ET ALICE
															$\alpha = -90^\circ, \beta = 0^\circ$
CHAN	T/C	FW/HT	Q/QS	M/HS(1.000)	H/HS(0.900)	M/HS(0.850)	CHAN	T/C	HM/HT	Q/QS	M/HS(1.000)	H/HS(0.900)	M/HS(0.850)		
1	1	0.430	0.0763	0.0925	0.0925	0.1036	39	51	0.431	0.0277	0.0277	0.0277	0.0336	0.0375	
2	2	0.430	0.1223	0.1582	0.1582	0.1662	40	54	0.420	0.1565	0.1565	0.1565	0.2374	0.2649	
3	3	0.431	0.1483	0.1759	0.1759	0.2014	41	55	0.419	0.1909	0.1909	0.1909	0.2306	0.2574	
4	4	0.431	0.1705	0.2069	0.2069	0.2316	42	56	0.428	0.1865	0.1865	0.1865	0.2261	0.2529	
5	5	0.431	0.1857	0.2252	0.2252	0.2521	43	57	0.432	0.1190	0.1190	0.1190	0.1443	0.1616	
6	6	0.432	0.1998	0.2425	0.2425	0.2715	44	58	0.432	0.0629	0.0629	0.0629	0.0763	0.0855	
7	7	0.432	0.1915	0.2324	0.2324	0.2602	45	60	0.420	0.1939	0.1939	0.1939	0.2343	0.2615	
8	8	0.431	0.1916	0.2324	0.2324	0.2602	46	61	0.421	0.1939	0.1939	0.1939	0.2343	0.2617	
9	9	0.430	0.1728	0.2096	0.2096	0.2346	47	62	0.429	0.1787	0.1787	0.1787	0.2167	0.2424	
10	10	0.428	0.1780	0.2157	0.2157	0.2412	48	63	0.433	0.1233	0.1233	0.1233	0.1497	0.1677	
11	11	0.426	0.1951	0.2363	0.2363	0.2641	49	64	0.433	0.0628	0.0628	0.0628	0.0762	0.0854	
12	12	0.422	0.2019	0.2442	0.2442	0.2727	50	65	0.430	0.0247	0.0247	0.0247	0.0300	0.0335	
13	13	0.426	0.0259	0.0314	0.0314	0.0351	51	66	0.426	0.0069	0.0069	0.0069	0.0084	0.0094	
14	14	0.420	0.2379	0.2874	0.2874	0.3268	52	67	0.421	0.0031	0.0031	0.0031	0.0042	0.0072	
15	15	0.420	0.2007	0.2425	0.2425	0.2767	53	68	0.410	0.0099	0.0099	0.0099	0.0118	0.0131	
16	16	0.432	0.1305	0.1584	0.1584	0.1774	54	70	0.420	0.2005	0.2005	0.2005	0.2423	0.2735	
17	17	0.432	0.0683	0.0829	0.0829	0.0928	55	71	0.429	0.1714	0.1714	0.1714	0.2078	0.2352	
18	18	0.430	0.0257	0.0311	0.0311	0.0348	56	72	0.431	0.1202	0.1202	0.1202	0.1458	0.1732	
19	19	0.420	0.2095	0.2531	0.2531	0.2826	57	73	0.431	0.0590	0.0590	0.0590	0.0716	0.0902	
20	20	0.432	0.1280	0.1553	0.1553	0.1739	58	77	0.422	0.1929	0.1929	0.1929	0.2332	0.2654	
21	21	0.419	0.2054	0.2481	0.2481	0.2768	59	78	0.429	0.1711	0.1711	0.1711	0.2075	0.2327	
22	22	0.428	0.1893	0.2282	0.2282	0.2552	60	79	0.431	0.1169	0.1169	0.1169	0.1419	0.1699	
23	23	0.432	0.1360	0.1650	0.1650	0.1848	61	81	0.430	0.0338	0.0338	0.0338	0.0399	0.0471	
24	24	0.433	0.0743	0.0902	0.0902	0.1010	62	84	0.423	0.1902	0.1902	0.1902	0.2321	0.2571	
25	25	0.430	0.0304	0.0369	0.0369	0.0413	63	85	0.430	0.1744	0.1744	0.1744	0.2115	0.2357	
26	26	0.426	0.0068	0.0082	0.0082	0.0091	64	86	0.432	0.1216	0.1216	0.1216	0.1476	0.1652	
27	27	0.420	0.0030	0.0036	0.0036	0.0040	65	90	0.422	0.2049	0.2049	0.2049	0.2477	0.2744	
28	28	0.407	0.0039	0.0047	0.0047	0.0052	66	91	0.429	0.1855	0.1855	0.1855	0.2249	0.2514	
29	29	0.419	0.1953	0.2359	0.2359	0.2632	67	92	0.432	0.1239	0.1239	0.1239	0.1504	0.1694	
30	30	0.420	0.1937	0.1937	0.1937	0.2612	68	94	0.430	0.0241	0.0241	0.0241	0.0322	0.0326	
31	31	0.429	0.1962	0.2257	0.2257	0.2524	69	98	0.422	0.1919	0.1919	0.1919	0.2310	0.2592	
32	32	0.432	0.1260	0.1529	0.1529	0.1712	70	99	0.431	0.1709	0.1709	0.1709	0.2114	0.2321	
33	33	0.433	0.0689	0.0835	0.0835	0.0935	71	100	0.434	0.1174	0.1174	0.1174	0.1426	0.1507	
34	34	0.434	0.0300	0.0300	0.0300	0.0000	72	103	0.424	0.1740	0.1740	0.1740	0.2105	0.2352	
35	35	0.421	0.2675	0.2508	0.2508	0.2800	73	104	0.432	0.1589	0.1589	0.1589	0.1928	0.2159	
36	36	0.429	0.2031	0.2426	0.2426	0.2714	74	105	0.434	0.1078	0.1078	0.1078	0.1310	0.1467	
37	37	0.433	0.1273	0.1546	0.1546	0.1731	75	107	0.432	0.0250	0.0250	0.0250	0.0323	0.0340	
38	38	0.431	0.0727	0.0882	0.0882	0.0988									

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42	59	334.7	605.4	22.994	20.261	123.273	100.931	7.010E-03	3.416E-03	0.369
43	57	337.3	607.1	14.575	12.843	122.528	107.954	2.0510E-03	1.6142E-03	0.392
44	56	337.7	607.0	7.711	6.794	122.552	107.926	4.9562E-03	5.542E-03	0.317
45	60	338.0	590.5	24.207	21.332	125.162	110.295	4.9562E-03	5.542E-03	0.324
46	61	339.0	592.3	24.214	21.336	124.878	110.035	4.9587E-03	5.5367E-03	0.348
47	62	335.2	603.4	22.032	19.387	123.117	109.493	4.9813E-03	5.1251E-03	0.373
48	61	339.1	608.6	15.034	13.291	122.293	107.757	3.1655E-03	3.544E-03	0.390
49	64	338.2	608.8	7.676	6.764	122.265	107.732	1.6115E-03	1.8048E-03	0.411
50	65	336.3	605.4	3.033	2.673	122.805	108.209	6.3344E-04	7.0495E-04	0.373
51	66	329.0	599.3	0.859	0.757	123.773	109.061	1.7775E-04	1.9873E-04	0.267
52	67	329.0	592.2	0.655	0.586	124.887	110.043	1.3616E-04	1.5203E-04	0.353
53	61	330.4	576.8	1.244	1.096	121.336	112.200	2.4923E-04	2.7739E-04	0.317
54	70	328.4	591.1	25.080	22.098	123.066	110.200	5.1268E-03	5.7231E-03	0.343
55	71	334.9	602.9	21.122	13.611	123.197	108.553	4.3946E-03	4.9161E-03	0.370
56	72	337.1	606.8	14.728	12.977	122.579	108.027	3.0825E-03	3.4507E-03	0.395
57	73	337.0	606.6	7.240	6.379	122.615	108.040	1.5147E-03	1.6555E-03	0.285
58	77	329.6	593.0	24.066	21.205	124.767	109.936	4.9334E-03	5.5092E-03	0.315
59	78	335.5	603.9	21.057	18.554	122.037	108.413	4.3879E-03	4.9092E-03	0.340
60	79	336.9	606.5	14.337	12.633	122.627	108.051	2.9922E-03	3.3574E-03	0.425
61	80	335.8	604.4	2.931	2.583	122.955	108.340	6.1131E-04	6.9124E-04	0.281
62	84	330.9	595.6	23.654	20.843	123.351	109.570	4.6661E-03	5.4387E-03	0.316
63	85	336.2	605.1	21.425	18.878	122.844	108.242	4.5728E-03	5.0551E-03	0.354
64	86	337.0	608.3	14.872	13.104	122.346	107.833	4.1195E-03	3.4930E-03	0.310
65	90	329.4	591.9	25.509	22.529	124.783	109.951	3.2407E-03	3.5523E-03	0.359
66	91	335.3	603.8	22.820	20.108	123.046	108.420	6.7549E-03	7.5320E-03	0.386
67	92	337.3	608.2	15.158	13.357	122.353	107.359	6.1794E-03	5.5601E-03	0.269
68	93	336.6	604.1	2.903	2.608	123.001	109.181	6.1701E-04	6.9009E-04	0.342
69	94	330.1	594.1	23.904	21.053	124.585	109.776	4.6304E-03	5.4326E-03	0.251
70	98	337.1	604.8	20.950	18.460	122.580	108.010	4.7844E-03	5.9291E-03	0.324
71	100	339.0	610.2	14.327	12.624	122.033	107.528	3.2164E-03	3.3766E-03	0.312
72	103	331.1	576.0	21.627	19.057	124.205	109.521	4.6322E-03	4.9768E-03	0.304
73	105	337.3	607.2	19.470	17.156	122.521	107.958	4.0772E-03	4.5146E-03	0.324
74	105	334.9	611.0	13.155	11.401	122.076	107.565	2.6299E-03	3.1013E-03	0.312
75	107	337.5	607.6	3.054	2.700	122.458	107.902	6.4198E-04	7.1374E-04	

PREC-01 IN-DENSITY-VELOCITY PRODUCT = 8.2742E-01 ISLUES/F12-SECI